

**ACIDIC PRECIPITATION
IN ONTARIO STUDY**

**ANNUAL STATISTICS OF CONCENTRATION
CUMULATIVE AMBIENT AIR
MONITORING NETWORK 1989**

DECEMBER 1992



**Environment
Environnement**

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ACIDIC PRECIPITATION IN ONTARIO STUDY
ANNUAL STATISTICS OF CONCENTRATION
CUMULATIVE AMBIENT AIR MONITORING NETWORK
1989

Report prepared by:

Special Studies and Research Management Unit
Atmospheric Research and Special Programs Section
Air Resources Branch
Ontario Ministry of the Environment

DECEMBER 1992

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This report was prepared by Joseph Lam, under the supervision of Dr.Neville Reid of the APIOS Atmospheric Deposition and Chemistry Program. However, the data themselves are a product of the combined efforts of many individuals. Collection of air filter samples was coordinated by Bill Trayling (in Northeastern Region), Steve Elliott (in Southeastern Region), Scott Kennedy (in Southwestern Region), Wim Smits (in Northwestern Region) and J.P. Varto (in Central Region). Sample handling was carried out by Gail Fieilding and overall coordination by Dan Orr at the Air Resources Branch. Chemical analyses were performed at the Laboratory Services and Applied Research Branch under the coordination of Frank Tomassini. Invaluable clerical was provided by Peter Maheras. All enquiries regarding the reported data should be directed to Neville Reid, Co-Ordinator, Atmospheric Deposition and Chemistry Program at (416) 235-6155.

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PART I
INTRODUCTION

INTRODUCTION

This report was prepared by Diane Green. The statistical summaries presented in this report pertain to the 1988 analytical results obtained from the Acidic Precipitation in Ontario Study (APIOS) cumulative ambient air monitoring network. The relevant data can be obtained on request from the Air Resources Branch of the Ontario Ministry of the Environment. Any sample of which sampling period is less than 23 days or greater than 33 days is not included in the statistics calculations. All available data are utilized in the calculations except results reported as being unreliable (i.e., results are identified as unreasonable values by using the validation procedures; detailed description of the validation procedure is available from the Ministry upon request) or approximate (i.e., inexact results are reported due to laboratory difficulties, such as may be encountered in calibration or when the samples cannot be analyzed to confirm the reported values). In a very few cases, concentration levels exceeded the upper limit of the range of the chemical analysis. Rather than using the upper limit, a decision was made to exclude these values from the statistics generated in this report. Results labelled as <W are replaced by "zero". W is the level which the analytical technique cannot distinguish from zero. Prior to 1986, a level was recorded less than one detection limit T, a value corresponding to one half the detection limit was utilized for statistical calculations as reported in the statistical summaries. These values are no longer halved.

Note that T is normally about ten times W , and values above the T criteria are considered to be precise and accurate. W corresponds to approximately one standard deviation of low level duplicate of real samples. In the presented statistics summaries, "Total Sulphur" is calculated by the summation of sulphur of Sulphur Dioxide" and "Sulphate".

Beginning in 1985, "Sulphur Dioxide" is corrected by the addition of nylon filter sulfate. In these reports sulphur loading on nylon filters is interpreted as sulphur dioxide. However, it is possible that organic sulphur compounds also contribute to this loading. Methods do not currently exist to quantify this contribution in routine network operation.

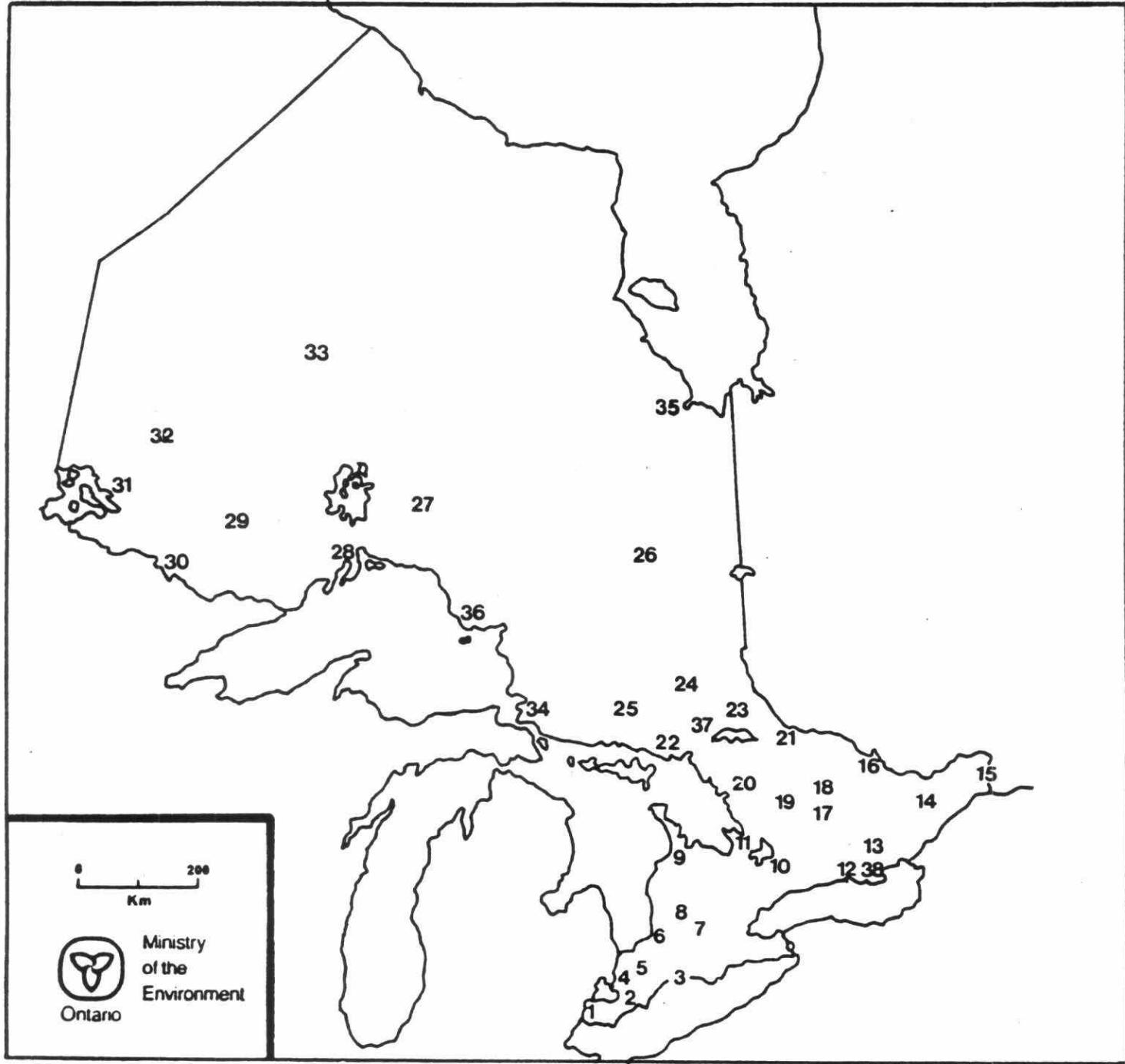
The statistical summaries presented in Parts III to IV include number of samples, mean (arithmetic/geometric), standard deviation (arithmetic/geometric), maximum, minimum, quartiles. These statistics are for an average sampling period.

Whatman 40 Blank Filters

The occurrence of non-zero blank values for the Whatman 40 filters used in the cumulative network should be borne in mind when interpreting data from this method.

PART II

STATION DESCRIPTION AND LOCATION MAP



1. Colchester*	14. Smith's Falls*	27. Geraldton
2. Merlin	15. Dalhousie Mills*	28. Dorion*
3. Pt. Stanley*	16. Golden Lake*	29. Quetico Centre*
4. Wilkesport*	17. Wilberforce	30. Lac La Croix
5. Alvinston	18. Whitney	31. E.L.A.
6. Huron Park	19. Dorset*	32. Ear Falls*
7. Waterloo	20. McKellar*	33. Pickle Lake*
8. Palmerston*	21. Mattawa*	34. Turkey Lake*
9. Shallow Lake*	22. Killarney*	35. Moosonee*
10. Uxbridge*	23. Bear Island	36. Otter Island*
11. Coldwater	24. Gowganda*	37. Mcfarlane Lake
12. Campbellford*	25. Azure Lake	38. Pt. Petre
13. Cloyne*	26. Moonbeam*	39. Sutton, Quebec (Intercomparison Site)

*Indicates both a wet and dry deposition network site

APIOS CUMULATIVE AMBIENT AIR NETWORK SITE DESCRIPTIONS

STATION ID	MOE REGION	STATION NAME	ELEV. (M)	LATITUDE (NORTH)	LONGITUDE (WEST)	UTM GRID CO-ORDINATES (NORTHING)	UTM GRID CO-ORDINATES (EASTING)
000001-22-21-1041	SOUTHWESTERN	COLCHESTER	183	41 59'15"	82 55'41"	4649973	340284
000001-22-21-1061	SOUTHWESTERN	PORT STANLEY	213	42 40'22"	81 09'55"	4724277	486457
000001-22-21-1071	SOUTHWESTERN	WILKESPORT	183	42 42'11"	82 21'13"	4728515	389135
000001-22-21-1091	SOUTHWESTERN	SHALLOW LAKE	229	44 34'54"	81 06'58"	4936270	490782
000001-22-21-1101	SOUTHWESTERN	PALMERSTON	389	43 48'19"	80 54'12"	4850035	507776
000001-22-21-3011	CENTRAL	DORSET	320	45 13'25"	78 55'51"	5009657	662451
000001-22-21-3061	CENTRAL	UXBRIDGE	244	44 12'46"	79 12'38"	4896847	642958
000001-22-21-3081	CENTRAL	CAMBELLFORD	175	44 17'28"	77 47'33"	4907783	277202
000001-22-21-4061	SOUTHEASTERN	SMITH'S FALLS	122	44 56'41"	75 57'48"	4977044	423999
000001-22-21-4071	SOUTHEASTERN	DALHOUSIE MILLS	69	45 19'00"	74 28'13"	5018048	541521
000001-22-21-4081	SOUTHEASTERN	GOLDEN LAKE	160	45 36'48"	77 12'03"	5053226	328397
000001-22-21-4091	SOUTHEASTERN	CLOYNE	259	44 49'10"	77 11'07"	4964999	327221
000001-22-21-5011	NORTHEASTERN	McKELLAR	244	45 31'15"	79 55'19"	5041158	584196
000001-22-21-5021	NORTHEASTERN	KILLARNEY	183	45 58'20"	81 29'18"	5090859	462167
000001-22-21-5031	NORTHEASTERN	MATTAWA	198	46 16'39"	78 49'19"	5126968	667810
000001-22-21-5061	NORTHEASTERN	GOWGANDA	343	47 39'04"	80 46'32"	5277329	516647
000001-22-21-5071	NORTHEASTERN	MOONBEAM	244	49 19'40"	82 01'10"	5464175	425924
000001-22-21-5141	NORTHEASTERN	TURKEY LAKES	440	47 03'15"	84 24'20"	5214246	697468
000001-22-21-5161	NORTHEASTERN	MOOSONEE	8	51 12'35"	80 42'20"	5672970	520568
000001-22-21-6011	NORTHWESTERN	DORION	244	48 50'33"	88 36'45"	5410982	381684
000001-22-21-6031	NORTHWESTERN	EAR FALLS	350	50 38'31"	93 13'13"	5609814	484424
000001-22-21-6041	NORTHWESTERN	PICKLE LAKE	360	51 02'41"	90 12'04"	5658308	696198
000001-22-21-6071	NORTHWESTERN	QUETICO CENTRE	420	48 24'44"	91 12'08"	5363461	633036
000001-22-21-6121	NORTHWESTERN	GERALDTON	350	49 48'18"	86 45'52"	5516758	516950

PART III

SUMMARY STATISTICS OF OBSERVED CONCENTRATION BY STATION

ONTARIO MINISTRY OF THE ENVIRONMENT
 APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
 SUMMARY STATISTICS OF CONCENTRATION
 YEAR 1989

STATION=' CAMPBELLFORD LOVOL SITE NO.1' -----

	SULFUR DIOXIDE AS SO ₂ UG/M3	SULFATE AS SO ₄ UG/M3	NITRIC AS N UG/M3	NITRATE AS N UG/M3	CALCIUM UG/M3	CHLORIDE UG/M3
# OF SAMPLES	: 10	10	10	10	10	10
MAXIMUM	: 548.348	701.346	7.0991	104.039	159.119	34.272
MINIMUM	: 20.1360	14.487	0.2460	2.864	1.9496	1.095
ARITH. MEAN	: 284.242	357.917	3.6725	53.452	80.5342	17.683
ARITH. STD. DEV	: 373.502	485.683	4.8459	71.541	111.135	23.460
GEOM. MEAN	: 105.079	100.799	1.3214	17.263	17.6130	6.125
1ST QUARTILE	: 20.1360	14.487	0.2460	2.864	1.9496	1.095
2ND QUARTILE	: 284.242	357.917	3.6725	53.452	80.5342	17.683
3RD QUARTILE	: 548.348	701.346	7.0991	104.039	159.119	34.272
MISSING VALUES	: 8	8	8	8	8	8
	POTASSIUM UG/M3	SODIUM UG/M3	IRON AS FE UG/M3	ALUMINIUM AS AL UG/M3	MAGNESIUM UG/M3	LEAD AS PB UG/M3
# OF SAMPLES	: 10	10	10	10	10	10
MAXIMUM	: 8.2619	14.6879	19.5838	20.8078	13.4639	1.7136
MINIMUM	: 0.1500	0.4349	0.3299	0.2609	0.2070	0.0360
ARITH. MEAN	: 4.2060	7.5614	9.9569	10.5344	6.8354	0.8748
ARITH. STD. DEV	: 5.7360	10.0784	13.6146	14.5288	9.3741	1.1862
GEOM. MEAN	: 1.1131	2.5274	2.5419	2.3302	1.6693	0.2483
1ST QUARTILE	: 0.1500	0.4349	0.3299	0.2609	0.2070	0.0360
2ND QUARTILE	: 4.2060	7.5614	9.9569	10.5344	6.8354	0.8748
3RD QUARTILE	: 8.2619	14.6879	19.5838	20.8078	13.4639	1.7136
MISSING VALUES	: 8	8	8	8	8	8
	MANGANESE AS MN UG/M3	COPPER AS CU UG/M3	NICKEL AS NI UG/M3	VANADIUM AS V UG/M3	ZINC AS ZN UG/M3	CADMIUM AS CD UG/M3
# OF SAMPLES	: 10	10	10	10	10	10
MAXIMUM	: 1.0526	0.4162	0.2938	0.1346	1.8360	0.04896
MINIMUM	: 0.0177	0.0063	0.0057	0.0057	0.0510	0.00120
ARITH. MEAN	: 0.5352	0.2112	0.1497	0.0702	0.9435	0.02508
ARITH. STD. DEV	: 0.7318	0.2898	0.2037	0.0912	1.2622	0.03377
GEOM. MEAN	: 0.1365	0.0512	0.0409	0.0277	0.3060	0.00766
1ST QUARTILE	: 0.0177	0.0063	0.0057	0.0057	0.0510	0.00120
2ND QUARTILE	: 0.5352	0.2112	0.1497	0.0702	0.9435	0.02508
3RD QUARTILE	: 1.0526	0.4162	0.2938	0.1346	1.8360	0.04896
MISSING VALUES	: 8	8	8	8	8	8

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
SUMMARY STATISTICS OF CONCENTRATION
YEAR 1989

----- STATION=' CAMPBELLFORD LOVOL SITE NO.1' -----

(continued)

	SULFATE NYL AS SO4 UG/M3	ARSENIC AS AS UG/M3	TOTAL SULFUR UG/M**3	TOTAL N NITRATE UG/M**3
# OF SAMPLES	10	10	10.00	10.00
MAXIMUM	128.519	0.2938	507.96	111.14
MINIMUM	3.5693	0.0063	14.90	3.11
ARITH. MEAN	66.0441	0.1500	261.43	57.12
ARITH. STD. DEV	88.3528	0.2033	348.65	76.39
GEOM. MEAN	21.4178	0.0430	86.99	18.59
1ST QUARTILE	3.5693	0.0063	14.90	3.11
2ND QUARTILE	66.0441	0.1500	261.43	57.12
3RD QUARTILE	128.519	0.2938	507.96	111.14
MISSING VALUES	8	8	8.00	8.00

ONTARIO MINISTRY OF THE ENVIRONMENT
 APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
 SUMMARY STATISTICS OF CONCENTRATION
 YEAR 1989

----- STATION=' CLOYNE LOVOL SITE NO.1' -----

	SULFUR DIOXIDE AS SO ₂ UG/M3	SULFATE AS SO ₄ UG/M3	NITRIC AS N UG/M3	NITRATE AS N UG/M3	CALCIUM UG/M3	CHLORIDE UG/M3
# OF SAMPLES	10	10	10	10	10	10
MAXIMUM	3.3064	1.856	0.0928	0.245	0.1436	0.175
MINIMUM	3.3064	1.856	0.0928	0.245	0.1436	0.175
ARITH. MEAN	3.3064	1.856	0.0928	0.245	0.1436	0.175
ARITH. STD. DEV	.	.	.	.	.	.
GEOM. MEAN	3.3064	1.856	0.0928	0.245	0.1436	0.175
1ST QUARTILE	3.3064	1.856	0.0928	0.245	0.1436	0.175
2ND QUARTILE	3.3064	1.856	0.0928	0.245	0.1436	0.175
3RD QUARTILE	3.3064	1.856	0.0928	0.245	0.1436	0.175
MISSING VALUES	9	9	9	9	9	9
	POTASSIUM UG/M3	SODIUM UG/M3	IRON AS FE UG/M3	ALUMINIUM AS AL UG/M3	MAGNESIUM UG/M3	LEAD AS PB UG/M3
# OF SAMPLES	10	10	10	10	10	10
MAXIMUM	0.0446	0.1103	0.0438	0.0438	0.0368	0.0040
MINIMUM	0.0446	0.1103	0.0438	0.0438	0.0368	0.0040
ARITH. MEAN	0.0446	0.1103	0.0438	0.0438	0.0368	0.0040
ARITH. STD. DEV	.	.	.	.	.	.
GEOM. MEAN	0.0446	0.1103	0.0438	0.0438	0.0368	0.0040
1ST QUARTILE	0.0446	0.1103	0.0438	0.0438	0.0368	0.0040
2ND QUARTILE	0.0446	0.1103	0.0438	0.0438	0.0368	0.0040
3RD QUARTILE	0.0446	0.1103	0.0438	0.0438	0.0368	0.0040
MISSING VALUES	9	9	9	9	9	9
	MANGANESE AS MN UG/M3	COPPER AS CU UG/M3	NICKEL AS NI UG/M3	VANADIUM AS V UG/M3	ZINC AS ZN UG/M3	CADMIUM AS CD UG/M3
# OF SAMPLES	10	10	10	10	10	10
MAXIMUM	0.0035	0.0032	0.0030	0.0005	0.0100	0.00018
MINIMUM	0.0035	0.0032	0.0030	0.0005	0.0100	0.00018
ARITH. MEAN	0.0035	0.0032	0.0030	0.0005	0.0100	0.00018
ARITH. STD. DEV	.	.	.	.	.	.
GEOM. MEAN	0.0035	0.0032	0.0030	0.0005	0.0100	0.00018
1ST QUARTILE	0.0035	0.0032	0.0030	0.0005	0.0100	0.00018
2ND QUARTILE	0.0035	0.0032	0.0030	0.0005	0.0100	0.00018
3RD QUARTILE	0.0035	0.0032	0.0030	0.0005	0.0100	0.00018
MISSING VALUES	9	9	9	9	9	9

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
SUMMARY STATISTICS OF CONCENTRATION
YEAR 1989

----- STATION=' CLOYNE LOVOL SITE NO.1' -----
(continued)

	SULFATE NYL AS SO4 UG/M3	ARSENIC AS AS UG/M3	TOTAL SULFUR UG/M**3	TOTAL N NITRATE UG/M**3
# OF SAMPLES	: 10	10	10.00	10.00
MAXIMUM	: 0.7695	0.0007	2.27	0.34
MINIMUM	: 0.7695	0.0007	2.27	0.34
ARITH. MEAN	: 0.7695	0.0007	2.27	0.34
ARITH. STD. DEV	: .	.	.	.
GEOM. MEAN	: 0.7695	0.0007	2.27	0.34
1ST QUARTILE	: 0.7695	0.0007	2.27	0.34
2ND QUARTILE	: 0.7695	0.0007	2.27	0.34
3RD QUARTILE	: 0.7695	0.0007	2.27	0.34
MISSING VALUES	: 9	9	9.00	9.00

ONTARIO MINISTRY OF THE ENVIRONMENT
 APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
 SUMMARY STATISTICS OF CONCENTRATION
 YEAR 1989

----- STATION=' COLCHESTER LOVOL SITE NO.1' -----

	SULFUR DIOXIDE AS SO ₂ UG/M3	SULFATE AS SO ₄ UG/M3	NITRIC AS N UG/M3	NITRATE AS N UG/M3	CALCIUM UG/M3	CHLORIDE UG/M3
# OF SAMPLES	13	13	13	13	13	13
MAXIMUM	23.6281	11.123	0.4778	1.424	1.7871	1.323
MINIMUM	8.0410	3.283	0.1719	0.903	0.3401	0.530
ARITH. MEAN	12.7609	5.915	0.3308	1.109	0.9235	0.742
ARITH. STD. DEV	4.6942	2.556	0.0754	0.140	0.4483	0.266
GEOM. MEAN	12.0867	5.477	0.3219	1.101	0.8253	0.705
1ST QUARTILE	9.1493	3.965	0.2974	1.010	0.5971	0.550
2ND QUARTILE	12.1606	4.880	0.3365	1.101	0.8825	0.611
3RD QUARTILE	14.3901	7.682	0.3691	1.181	1.1231	0.899
MISSING VALUES	1	1	1	1	1	1
	POTASSIUM UG/M3	SODIUM UG/M3	IRON AS FE UG/M3	ALUMINIUM AS AL UG/M3	MAGNESIUM UG/M3	LEAD AS PB UG/M3
# OF SAMPLES	13	13	13	13	13	13
MAXIMUM	0.1313	0.6084	0.2723	0.2227	0.3773	0.0239
MINIMUM	0.0099	0.1248	0.1374	0.0920	0.1190	0.0047
ARITH. MEAN	0.0696	0.2540	0.2204	0.1464	0.1931	0.0137
ARITH. STD. DEV	0.0299	0.1487	0.0454	0.0475	0.0780	0.0049
GEOM. MEAN	0.0610	0.2235	0.2156	0.1397	0.1810	0.0128
1ST QUARTILE	0.0586	0.1568	0.1877	0.1074	0.1333	0.0109
2ND QUARTILE	0.0664	0.1748	0.2313	0.1285	0.1706	0.0131
3RD QUARTILE	0.0788	0.3401	0.2576	0.1876	0.2278	0.0159
MISSING VALUES	1	1	1	1	1	1
	MANGANESE AS MN UG/M3	COPPER AS CU UG/M3	NICKEL AS NI UG/M3	VANADIUM AS V UG/M3	ZINC AS ZN UG/M3	CADMIUM AS CD UG/M3
# OF SAMPLES	13	13	13	13	13	13
MAXIMUM	0.0116	0.0126	0.0174	0.0030	0.0738	0.00202
MINIMUM	0.0073	0.0019	0.0013	0.0013	0.0255	0.00039
ARITH. MEAN	0.0102	0.0048	0.0031	0.0019	0.0456	0.00084
ARITH. STD. DEV	0.0014	0.0027	0.0045	0.0005	0.0154	0.00045
GEOM. MEAN	0.0101	0.0043	0.0021	0.0019	0.0432	0.00076
1ST QUARTILE	0.0098	0.0034	0.0015	0.0015	0.0325	0.00058
2ND QUARTILE	0.0105	0.0041	0.0018	0.0019	0.0457	0.00074
3RD QUARTILE	0.0112	0.0051	0.0023	0.0022	0.0562	0.00105
MISSING VALUES	1	1	1	1	1	1

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
SUMMARY STATISTICS OF CONCENTRATION
YEAR 1989

----- STATION=' COLCHESTER LOVOL SITE NO.1' -----
(continued)

	SULFATE NYL AS SO4 UG/M3	ARSENIC AS AS UG/M3	TOTAL SULFUR UG/M**3	TOTAL N NITRATE UG/M**3
# OF SAMPLES	: 13	13	13.00	13.00
MAXIMUM	: 4.1716	0.0024	13.18	1.81
MINIMUM	: 1.1296	0.0008	5.94	1.08
ARITH. MEAN	: 2.0786	0.0016	8.35	1.44
ARITH. STD. DEV	: 0.8888	0.0005	2.11	0.19
GEOM. MEAN	: 1.9320	0.0016	8.14	1.43
1ST QUARTILE	: 1.6068	0.0012	7.07	1.37
2ND QUARTILE	: 1.7229	0.0016	7.44	1.43
3RD QUARTILE	: 2.6438	0.0021	9.63	1.54
MISSING VALUES	: 1	1	1.00	1.00

ONTARIO MINISTRY OF THE ENVIRONMENT
 APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
 SUMMARY STATISTICS OF CONCENTRATION
 YEAR 1989

----- STATION=' DALHOUSIE MILLS LOVOL SITE NO.1' -----

	SULFUR DIOXIDE AS SO ₂ UG/M3	SULFATE AS SO ₄ UG/M3	NITRIC AS N UG/M3	NITRATE AS N UG/M3	CALCIUM UG/M3	CHLORIDE UG/M3
# OF SAMPLES	: 13	13	13	13	13	13
MAXIMUM	: 30.0888	9.853	0.2581	1.408	1.0281	3.712
MINIMUM	: 0.7670	2.788	0.0536	0.232	0.3317	0.281
ARITH. MEAN	: 5.9771	5.099	0.1216	0.623	0.6652	0.832
ARITH. STD. DEV	: 8.8207	1.984	0.0674	0.319	0.1885	1.017
GEOM. MEAN	: 3.1534	4.800	0.1067	0.557	0.6393	0.561
1ST QUARTILE	: 1.6131	3.476	0.0720	0.451	0.5132	0.305
2ND QUARTILE	: 1.9573	4.523	0.1016	0.547	0.6900	0.394
3RD QUARTILE	: 5.6784	5.916	0.1950	0.703	0.7946	1.061
MISSING VALUES	: 2	2	2	2	2	2
	POTASSIUM UG/M3	SODIUM UG/M3	IRON AS FE UG/M3	ALUMINIUM AS AL UG/M3	MAGNESIUM UG/M3	LEAD AS PB UG/M3
# OF SAMPLES	: 13	13	13	13	13	13
MAXIMUM	: 1.9289	0.7749	0.2372	0.2900	0.1450	0.0159
MINIMUM	: 0.0637	0.1318	0.0597	0.0624	0.0584	0.0038
ARITH. MEAN	: 0.4159	0.2718	0.1250	0.1378	0.1014	0.0117
ARITH. STD. DEV	: 0.6311	0.2220	0.0542	0.0741	0.0276	0.0035
GEOM. MEAN	: 0.1946	0.2198	0.1158	0.1228	0.0980	0.0110
1ST QUARTILE	: 0.0857	0.1357	0.0966	0.0910	0.0832	0.0095
2ND QUARTILE	: 0.1192	0.1901	0.1056	0.1121	0.0946	0.0116
3RD QUARTILE	: 0.2615	0.2275	0.1589	0.1722	0.1303	0.0144
MISSING VALUES	: 2	3	2	2	2	2
	MANGANESE AS MN UG/M3	COPPER AS CU UG/M3	NICKEL AS NI UG/M3	VANADIUM AS V UG/M3	ZINC AS ZN UG/M3	CADMIUM AS CD UG/M3
# OF SAMPLES	: 13	13	13	13	13	13
MAXIMUM	: 0.0301	0.0072	0.0058	0.0097	0.0524	0.00796
MINIMUM	: 0.0062	0.0000	0.0009	0.0007	0.0159	0.00000
ARITH. MEAN	: 0.0149	0.0030	0.0022	0.0029	0.0263	0.00110
ARITH. STD. DEV	: 0.0086	0.0020	0.0015	0.0027	0.0109	0.00229
GEOM. MEAN	: 0.0127	0.0035	0.0019	0.0021	0.0246	0.00054
1ST QUARTILE	: 0.0069	0.0022	0.0011	0.0012	0.0178	0.00026
2ND QUARTILE	: 0.0127	0.0032	0.0017	0.0018	0.0251	0.00034
3RD QUARTILE	: 0.0239	0.0040	0.0024	0.0033	0.0316	0.00077
MISSING VALUES	: 2	2	2	2	2	2

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
SUMMARY STATISTICS OF CONCENTRATION
YEAR 1989

----- STATION=' DALHOUSIE MILLS LOVOL SITE NO.1' -----
(continued)

	SULFATE NYL AS SO4 UG/M3	ARSENIC AS AS UG/M3	TOTAL SULFUR UG/M**3	TOTAL N NITRATE UG/M**3
# OF SAMPLES	: 13	: 13	: 13.00	: 13.00
MAXIMUM	: 2.4413	: 0.0193	: 17.34	: 1.67
MINIMUM	: 0.7191	: 0.0004	: 1.74	: 0.29
ARITH. MEAN	: 1.3059	: 0.0033	: 4.69	: 0.74
ARITH. STD. DEV	: 0.5786	: 0.0054	: 4.55	: 0.37
GEOM. MÉAN	: 1.2065	: 0.0017	: 3.62	: 0.67
1ST QUARTILE	: 0.8180	: 0.0006	: 2.30	: 0.53
2ND QUARTILE	: 1.1071	: 0.0017	: 3.10	: 0.74
3RD QUARTILE	: 1.6709	: 0.0031	: 4.32	: 0.90
MISSING VALUES	: 2	: 2	: 2.00	: 2.00

ONTARIO MINISTRY OF THE ENVIRONMENT
 APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
 SUMMARY STATISTICS OF CONCENTRATION
 YEAR 1989

----- STATION=' DORION LOVOL SITE NO.1' -----

	SULFUR DIOXIDE AS SO ₂ UG/M3	SULFATE AS SO ₄ UG/M3	NITRIC AS N UG/M3	NITRATE AS N UG/M3	CALCIUM UG/M3	CHLORIDE UG/M3
# OF SAMPLES	13	13	13	13	13	13
MAXIMUM	1.5647	5.106	2.5106	1.702	8.5106	8.085
MINIMUM	0.0000	0.260	0.0296	0.039	0.0000	0.083
ARITH. MEAN	0.7011	1.305	0.2544	0.210	0.7921	0.804
ARITH. STD. DEV	0.5153	1.268	0.7108	0.471	2.4321	2.294
GEOM. MEAN	0.7406	0.991	0.0647	0.089	0.1158	0.189
1ST QUARTILE	0.3798	0.667	0.0375	0.051	0.0378	0.111
2ND QUARTILE	0.5990	1.040	0.0397	0.067	0.0723	0.137
3RD QUARTILE	1.0489	1.443	0.0740	0.110	0.1440	0.183
MISSING VALUES	1	1	1	1	1	1
	POTASSIUM UG/M3	SODIUM UG/M3	IRON AS FE UG/M3	ALUMINIUM AS AL UG/M3	MAGNESIUM UG/M3	LEAD AS PB UG/M3
# OF SAMPLES	13	13	13	13	13	13
MAXIMUM	0.2128	4.7660	12.7660	1.0213	1.1915	0.3404
MINIMUM	0.0078	0.0694	0.0000	0.0077	0.0102	0.0000
ARITH. MEAN	0.0399	0.5114	1.0974	0.1330	0.1419	0.0310
ARITH. STD. DEV	0.0563	1.3404	3.6747	0.2829	0.3319	0.0975
GEOM. MEAN	0.0246	0.1619	0.0717	0.0470	0.0492	0.0034
1ST QUARTILE	0.0132	0.1065	0.0216	0.0193	0.0216	0.0007
2ND QUARTILE	0.0208	0.1148	0.0368	0.0402	0.0414	0.0029
3RD QUARTILE	0.0414	0.1563	0.0647	0.1022	0.0821	0.0052
MISSING VALUES	1	1	1	1	1	1
	MANGANESE AS MN UG/M3	COPPER AS CU UG/M3	NICKEL AS NI UG/M3	VANADIUM AS V UG/M3	ZINC AS ZN UG/M3	CADMIUM AS CD UG/M3
# OF SAMPLES	13	13	13	13	13	13
MAXIMUM	0.0681	0.0170	0.0340	0.0004	0.0681	0.00036
MINIMUM	0.0006	0.0006	0.0000	0.0000	0.0014	0.00000
ARITH. MEAN	0.0074	0.0023	0.0032	0.0002	0.0087	0.00008
ARITH. STD. DEV	0.0191	0.0046	0.0097	0.0001	0.0188	0.00012
GEOM. MEAN	0.0022	0.0012	0.0007	0.0003	0.0038	0.00017
1ST QUARTILE	0.0012	0.0008	0.0003	0.0001	0.0019	0.00000
2ND QUARTILE	0.0016	0.0010	0.0004	0.0003	0.0032	0.00000
3RD QUARTILE	0.0033	0.0011	0.0007	0.0004	0.0052	0.00012
MISSING VALUES	1	1	1	1	1	1

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
SUMMARY STATISTICS OF CONCENTRATION
YEAR 1989

----- STATION=' DORION LOVOL SITE NO.1' -----

(continued)

	SULFATE NYL AS SO4 UG/M3	ARSENIC AS AS UG/M3	TOTAL SULFUR UG/M**3	TOTAL N NITRATE UG/M**3
# OF SAMPLES	: 13	13	13.00	13.00
MAXIMUM	: 3.1489	0.0011	1.70	4.21
MINIMUM	: 0.2834	0.0000	0.39	0.07
ARITH. MEAN	: 0.7007	0.0005	0.79	0.46
ARITH. STD. DEV	: 0.7813	0.0004	0.40	1.18
GEOM. MEAN	: 0.5411	0.0006	0.70	0.15
1ST QUARTILE	: 0.4040	0.0002	0.47	0.09
2ND QUARTILE	: 0.4742	0.0004	0.67	0.11
3RD QUARTILE	: 0.6121	0.0008	0.98	0.19
MISSING VALUES	: 1	1	1.00	1.00

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ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
SUMMARY STATISTICS OF CONCENTRATION
YEAR 1989

----- STATION=' DORSET LOVOL SITE NO.1' -----

	SULFUR DIOXIDE AS SO ₂ UG/M3	SULFATE AS SO ₄ UG/M3	NITRIC AS N UG/M3	NITRATE AS N UG/M3	CALCIUM UG/M3	CHLORIDE UG/M3
# OF SAMPLES	13	13	13	13	13	13
MAXIMUM	7.6566	8.954	0.4066	0.214	0.2877	0.129
MINIMUM	0.7055	0.955	0.0713	0.000	0.0000	0.000
ARITH. MEAN	3.8801	3.631	0.2454	0.070	0.1032	0.029
ARITH. STD. DEV	2.2040	2.024	0.0984	0.082	0.0893	0.051
GEOM. MEAN	3.1936	3.147	0.2232	0.061	0.0888	0.062
1ST QUARTILE	1.7168	2.641	0.1746	0.000	0.0457	0.000
2ND QUARTILE	3.7580	3.446	0.2604	0.023	0.0790	0.000
3RD QUARTILE	6.0670	4.147	0.3030	0.145	0.1154	0.047
MISSING VALUES	2	1	1	1	1	1
	POTASSIUM UG/M3	SODIUM UG/M3	IRON AS FE UG/M3	ALUMINIUM AS AL UG/M3	MAGNESIUM UG/M3	LEAD AS PB UG/M3
# OF SAMPLES	13	13	13	13	13	13
MAXIMUM	0.1199	0.2470	0.6027	0.6849	0.2055	0.0107
MINIMUM	0.0140	0.0293	0.0193	0.0191	0.0146	0.0000
ARITH. MEAN	0.0510	0.0890	0.1624	0.1675	0.0681	0.0050
ARITH. STD. DEV	0.0299	0.0689	0.1938	0.2137	0.0629	0.0030
GEOM. MEAN	0.0439	0.0689	0.0817	0.0820	0.0478	0.0048
1ST QUARTILE	0.0334	0.0369	0.0322	0.0324	0.0245	0.0036
2ND QUARTILE	0.0416	0.0580	0.0492	0.0531	0.0348	0.0045
3RD QUARTILE	0.0621	0.1255	0.2792	0.2860	0.1052	0.0066
MISSING VALUES	1	1	1	1	1	1
	MANGANESE AS MN UG/M3	COPPER AS CU UG/M3	NICKEL AS NI UG/M3	VANADIUM AS V UG/M3	ZINC AS ZN UG/M3	CADMUM AS CD UG/M3
# OF SAMPLES	13	13	13	13	13	13
MAXIMUM	0.0121	0.0043	0.0024	0.0013	0.0220	0.00048
MINIMUM	0.0012	0.0011	0.0003	0.0002	0.0038	0.00011
ARITH. MEAN	0.0048	0.0025	0.0011	0.0008	0.0105	0.00027
ARITH. STD. DEV	0.0034	0.0008	0.0005	0.0003	0.0044	0.00013
GEOM. MEAN	0.0038	0.0024	0.0010	0.0007	0.0097	0.00024
1ST QUARTILE	0.0023	0.0022	0.0008	0.0005	0.0082	0.00013
2ND QUARTILE	0.0034	0.0025	0.0010	0.0007	0.0097	0.00024
3RD QUARTILE	0.0072	0.0028	0.0013	0.0010	0.0117	0.00035
MISSING VALUES	1	1	1	1	1	1

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ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
SUMMARY STATISTICS OF CONCENTRATION
YEAR 1989

----- STATION=' DORSET LOVOL SITE NO.1' -----
(continued)

	SULFATE NYL AS SO4 UG/M3	ARSENIC AS AS UG/M3	TOTAL SULFUR UG/M**3	TOTAL N NITRATE UG/M**3
# OF SAMPLES	: 13	13	13.00	13.00
MAXIMUM	: 1.1205	0.0024	4.55	0.44
MINIMUM	: 0.2774	0.0004	1.70	0.19
ARITH. MEAN	: 0.7392	0.0013	3.15	0.32
ARITH. STD. DEV	: 0.2786	0.0006	0.97	0.09
GEOM. MEAN	: 0.6846	0.0011	3.00	0.31
1ST QUARTILE	: 0.5236	0.0008	1.97	0.23
2ND QUARTILE	: 0.7234	0.0013	3.31	0.31
3RD QUARTILE	: 1.0376	0.0016	3.79	0.37
MISSING VALUES	: 1	1	2.00	2.00

ONTARIO MINISTRY OF THE ENVIRONMENT
 APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
 SUMMARY STATISTICS OF CONCENTRATION
 YEAR 1989

----- STATION=' EAR FALLS LOVOL SITE NO.1' -----

	SULFUR DIOXIDE AS SO ₂ UG/M3	SULFATE AS SO ₄ UG/M3	NITRIC AS N UG/M3	NITRATE AS N UG/M3	CALCIUM UG/M3	CHLORIDE UG/M3
# OF SAMPLES	: 13	13	13	13	13	13
MAXIMUM	: 3.1441	4.244	0.5754	0.189	0.5093	2.452
MINIMUM	: 0.3066	0.895	0.0375	0.054	0.0000	0.108
ARITH. MEAN	: 0.9618	1.622	0.0982	0.096	0.1954	0.355
ARITH. STD. DEV	: 0.9137	0.943	0.1443	0.042	0.1471	0.637
GEOM. MEAN	: 0.6850	1.446	0.0674	0.089	0.1620	0.203
1ST QUARTILE	: 0.3411	0.996	0.0456	0.066	0.0839	0.135
2ND QUARTILE	: 0.5321	1.355	0.0591	0.077	0.1769	0.148
3RD QUARTILE	: 1.4916	1.624	0.0666	0.117	0.2628	0.193
MISSING VALUES	: 0	0	0	0	0	0
	POTASSIUM UG/M3	SODIUM UG/M3	IRON AS FE UG/M3	ALUMINIUM AS AL UG/M3	MAGNESIUM UG/M3	LEAD AS PB UG/M3
# OF SAMPLES	: 13	13	13	13	13	13
MAXIMUM	: 0.1132	1.6035	0.2436	0.3755	0.1218	0.0080
MINIMUM	: 0.0106	0.0790	0.0000	0.0193	0.0193	0.0015
ARITH. MEAN	: 0.0462	0.2946	0.1123	0.1278	0.0658	0.0051
ARITH. STD. DEV	: 0.0281	0.4164	0.0736	0.1052	0.0304	0.0024
GEOM. MEAN	: 0.0389	0.1812	0.1032	0.0889	0.0581	0.0044
1ST QUARTILE	: 0.0270	0.0887	0.0524	0.0472	0.0443	0.0038
2ND QUARTILE	: 0.0380	0.1350	0.1154	0.0943	0.0736	0.0055
3RD QUARTILE	: 0.0584	0.2943	0.1752	0.1792	0.0797	0.0073
MISSING VALUES	: 0	0	0	0	0	0
	MANGANESE AS MN UG/M3	COPPER AS CU UG/M3	NICKEL AS NI UG/M3	VANADIUM AS V UG/M3	ZINC AS ZN UG/M3	CADMIUM AS CD UG/M3
# OF SAMPLES	: 13	13	13	13	13	13
MAXIMUM	: 0.0075	0.0057	0.0015	0.0007	0.0091	0.00048
MINIMUM	: 0.0006	0.0002	0.0000	0.0000	0.0000	0.00000
ARITH. MEAN	: 0.0043	0.0015	0.0006	0.0004	0.0049	0.00017
ARITH. STD. DEV	: 0.0024	0.0014	0.0005	0.0002	0.0023	0.00018
GEOM. MEAN	: 0.0035	0.0011	0.0007	0.0004	0.0050	0.00023
1ST QUARTILE	: 0.0024	0.0009	0.0004	0.0002	0.0036	0.00000
2ND QUARTILE	: 0.0047	0.0011	0.0006	0.0004	0.0051	0.00012
3RD QUARTILE	: 0.0065	0.0015	0.0009	0.0005	0.0064	0.00034
MISSING VALUES	: 0	0	0	0	0	0

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
SUMMARY STATISTICS OF CONCENTRATION
YEAR 1989

----- STATION=' EAR FALLS LOVOL SITE NO.1' -----
(continued)

	SULFATE NYL AS SO4 UG/M3	ARSENIC AS AS UG/M3	TOTAL SULFUR UG/M**3	TOTAL N NITRATE UG/M**3
# OF SAMPLES	: 13	13	13.00	13.00
MAXIMUM	: 3.0749	0.0043	2.99	0.76
MINIMUM	: 0.2372	0.0003	0.45	0.10
ARITH. MEAN	: 0.6040	0.0015	1.02	0.19
ARITH. STD. DEV	: 0.7531	0.0014	0.73	0.18
GEOM. MEAN	: 0.4449	0.0010	0.85	0.16
1ST QUARTILE	: 0.3216	0.0005	0.53	0.12
2ND QUARTILE	: 0.3612	0.0009	0.72	0.13
3RD QUARTILE	: 0.5204	0.0020	1.23	0.19
MISSING VALUES	: 0	0	0.00	0.00

ONTARIO MINISTRY OF THE ENVIRONMENT
 APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
 SUMMARY STATISTICS OF CONCENTRATION
 YEAR 1989

----- STATION=' GERALDTON LOVOL SITE NO.1' -----

	SULFUR DIOXIDE	SULFATE	NITRIC	NITRATE	CALCIUM	CHLORIDE
	AS SO ₂ UG/M3	AS SO ₄ UG/M3	AS N UG/M3	AS N UG/M3	UG/M3	UG/M3
# OF SAMPLES	: 13	13	13	13	13	13
MAXIMUM	: 5.4108	3.417	0.5980	1.282	0.7840	2.990
MINIMUM	: 0.1210	0.141	0.0235	0.025	0.0000	0.100
ARITH. MEAN	: 1.0947	1.336	0.0920	0.178	0.2395	0.381
ARITH. STD. DEV	: 1.4216	0.895	0.1602	0.349	0.2549	0.822
GEOM. MEAN	: 0.6589	1.010	0.0536	0.089	0.1863	0.181
1ST QUARTILE	: 0.4285	0.782	0.0356	0.052	0.0333	0.122
2ND QUARTILE	: 0.6253	1.239	0.0452	0.084	0.1614	0.144
3RD QUARTILE	: 1.2045	1.735	0.0639	0.101	0.3337	0.162
MISSING VALUES	: 1	1	1	1	1	1
	POTASSIUM	SODIUM	IRON AS FE	ALUMINIUM AS AL	MAGNESIUM	LEAD AS PB
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
# OF SAMPLES	: 13	13	13	13	13	13
MAXIMUM	: 0.0605	1.7087	0.1989	0.1236	0.2478	0.0090
MINIMUM	: 0.0000	0.0648	0.0000	0.0080	0.0106	0.0000
ARITH. MEAN	: 0.0224	0.2523	0.0506	0.0525	0.0723	0.0033
ARITH. STD. DEV	: 0.0199	0.4603	0.0573	0.0426	0.0720	0.0032
GEOM. MEAN	: 0.0203	0.1419	0.0391	0.0352	0.0467	0.0032
1ST QUARTILE	: 0.0072	0.0899	0.0091	0.0151	0.0222	0.0003
2ND QUARTILE	: 0.0167	0.1293	0.0401	0.0442	0.0492	0.0026
3RD QUARTILE	: 0.0365	0.1578	0.0663	0.0845	0.0888	0.0053
MISSING VALUES	: 1	1	1	1	1	1
	MANGANESE AS MN UG/M3	COPPER AS CU UG/M3	NICKEL AS NI UG/M3	VANADIUM AS V UG/M3	ZINC AS ZN UG/M3	CADMIUM AS CD UG/M3
# OF SAMPLES	: 13	13	13	13	13	13
MAXIMUM	: 0.0128	0.0011	0.0014	0.0003	0.0128	0.00427
MINIMUM	: 0.0004	0.0000	0.0000	0.0000	0.0008	0.00000
ARITH. MEAN	: 0.0030	0.0007	0.0005	0.0002	0.0040	0.00058
ARITH. STD. DEV	: 0.0034	0.0003	0.0004	0.0001	0.0031	0.00125
GEOM. MEAN	: 0.0019	0.0007	0.0007	0.0002	0.0031	0.00027
1ST QUARTILE	: 0.0008	0.0005	0.0000	0.0001	0.0021	0.00005
2ND QUARTILE	: 0.0020	0.0008	0.0005	0.0002	0.0038	0.00013
3RD QUARTILE	: 0.0038	0.0009	0.0008	0.0003	0.0047	0.00019
MISSING VALUES	: 1	1	1	1	1	1

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
SUMMARY STATISTICS OF CONCENTRATION
YEAR 1989

----- STATION=' GERALDTON LOVOL SITE NO.1' -----
(continued)

	SULFATE NYL AS SO4 UG/M3	ARSENIC AS AS UG/M3	TOTAL SULFUR UG/M**3	TOTAL N NITRATE UG/M**3
# OF SAMPLES	: 13	13	13.00	13.00
MAXIMUM	: 5.5532	0.0085	3.84	1.88
MINIMUM	: 0.1479	0.0000	0.11	0.05
ARITH. MEAN	: 0.8924	0.0011	0.99	0.27
ARITH. STD. DEV	: 1.4791	0.0024	0.96	0.51
GEOM. MEAN	: 0.5202	0.0006	0.70	0.14
1ST QUARTILE	: 0.3922	0.0003	0.55	0.09
2ND QUARTILE	: 0.5496	0.0004	0.88	0.13
3RD QUARTILE	: 0.5925	0.0007	1.04	0.16
MISSING VALUES	: 1	1	1.00	1.00

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ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
SUMMARY STATISTICS OF CONCENTRATION
YEAR 1989

----- STATION=' GOLDEN LAKE LOVOL SITE NO.1' -----

	SULFUR DIOXIDE AS SO ₂ UG/M3	SULFATE AS SO ₄ UG/M3	NITRIC AS N UG/M3	NITRATE AS N UG/M3	CALCIUM UG/M3	CHLORIDE UG/M3
# OF SAMPLES	12	12	12	12	12	12
MAXIMUM	10.1090	6.443	0.1752	0.443	0.2838	0.465
MINIMUM	0.6245	1.519	0.0393	0.104	0.0000	0.197
ARITH. MEAN	3.6508	3.899	0.0668	0.240	0.1352	0.291
ARITH. STD. DEV	2.8170	1.496	0.0422	0.107	0.0842	0.087
GEOM. MEAN	2.8584	3.615	0.0590	0.219	0.1633	0.281
1ST QUARTILE	2.0385	2.675	0.0406	0.161	0.1051	0.228
2ND QUARTILE	2.5538	3.875	0.0500	0.245	0.1545	0.262
3RD QUARTILE	4.1143	4.645	0.0809	0.284	0.1662	0.327
MISSING VALUES	2	2	2	2	2	2
	POTASSIUM UG/M3	SODIUM UG/M3	IRON AS FE UG/M3	ALUMINIUM AS AL UG/M3	MAGNESIUM UG/M3	LEAD AS PB UG/M3
# OF SAMPLES	12	12	12	12	12	12
MAXIMUM	0.1322	0.2617	0.1449	0.2078	0.0911	0.0128
MINIMUM	0.0365	0.0971	0.0320	0.0264	0.0342	0.0006
ARITH. MEAN	0.0806	0.1552	0.0800	0.0870	0.0578	0.0042
ARITH. STD. DEV	0.0346	0.0557	0.0343	0.0610	0.0189	0.0038
GEOM. MEAN	0.0737	0.1473	0.0734	0.0695	0.0551	0.0028
1ST QUARTILE	0.0515	0.1179	0.0605	0.0349	0.0423	0.0011
2ND QUARTILE	0.0774	0.1382	0.0733	0.0734	0.0544	0.0030
3RD QUARTILE	0.1083	0.1798	0.0989	0.1259	0.0774	0.0064
MISSING VALUES	2	2	2	2	2	2
	MANGANESE AS MN UG/M3	COPPER AS CU UG/M3	NICKEL AS NI UG/M3	VANADIUM AS V UG/M3	ZINC AS ZN UG/M3	CADMIUM AS CD UG/M3
# OF SAMPLES	12	12	12	12	12	12
MAXIMUM	0.0073	0.0111	0.0240	0.0022	0.0390	0.00741
MINIMUM	0.0028	0.0000	0.0006	0.0006	0.0071	0.00015
ARITH. MEAN	0.0045	0.0033	0.0032	0.0010	0.0151	0.00106
ARITH. STD. DEV	0.0016	0.0031	0.0073	0.0005	0.0106	0.00225
GEOM. MEAN	0.0043	0.0036	0.0012	0.0009	0.0128	0.00040
1ST QUARTILE	0.0031	0.0019	0.0006	0.0007	0.0089	0.00019
2ND QUARTILE	0.0040	0.0029	0.0009	0.0008	0.0107	0.00030
3RD QUARTILE	0.0055	0.0040	0.0013	0.0012	0.0174	0.00042
MISSING VALUES	2	2	2	2	2	2

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
SUMMARY STATISTICS OF CONCENTRATION
YEAR 1989

----- STATION=' GOLDEN LAKE LOVOL SITE NO.1' -----
(continued)

	SULFATE NYL AS SO4 UG/M3	ARSENIC AS AS UG/M3	TOTAL SULFUR UG/M**3	TOTAL N NITRATE UG/M**3
# OF SAMPLES	:	12	12	12.00
MAXIMUM	:	1.6647	0.0039	5.95
MINIMUM	:	0.5855	0.0006	1.48
ARITH. MEAN	:	1.1654	0.0017	3.13
ARITH. STD. DEV	:	0.3202	0.0012	1.33
GEOM. MEAN	:	1.1225	0.0014	2.89
1ST QUARTILE	:	1.0217	0.0008	2.10
2ND QUARTILE	:	1.1488	0.0013	3.07
3RD QUARTILE	:	1.2658	0.0023	3.59
MISSING VALUES	:	2	2	2.00

ONTARIO MINISTRY OF THE ENVIRONMENT
 APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
 SUMMARY STATISTICS OF CONCENTRATION
 YEAR 1989

----- STATION=' GOWGANDA LOVOL SITE NO.1' -----

	SULFUR DIOXIDE AS SO ₂ UG/M3	SULFATE AS SO ₄ UG/M3	NITRIC AS N UG/M3	NITRATE AS N UG/M3	CALCIUM UG/M3	CHLORIDE UG/M3
# OF SAMPLES	: 13	13	13	13	13	13
MAXIMUM	: 10.3512	3.175	0.2047	0.206	0.1157	0.382
MINIMUM	: 0.8827	1.340	0.0637	0.056	0.0000	0.082
ARITH. MEAN	: 4.9029	2.137	0.1255	0.117	0.0403	0.150
ARITH. STD. DEV	: 2.7702	0.658	0.0466	0.053	0.0328	0.076
GEOM. MEAN	: 4.1315	2.047	0.1179	0.106	0.0469	0.138
1ST QUARTILE	: 3.0324	1.598	0.0969	0.076	0.0189	0.120
2ND QUARTILE	: 4.2055	1.928	0.1107	0.102	0.0400	0.125
3RD QUARTILE	: 6.0430	2.622	0.1480	0.165	0.0536	0.168
MISSING VALUES	: 0	0	0	0	0	0
	POTASSIUM UG/M3	SODIUM UG/M3	IRON AS FE UG/M3	ALUMINIUM AS AL UG/M3	MAGNESIUM UG/M3	LEAD AS PB UG/M3
# OF SAMPLES	: 13	13	13	13	13	13
MAXIMUM	: 0.2034	0.4887	0.1334	0.1756	0.6269	0.0146
MINIMUM	: 0.0152	0.0787	0.0000	0.0109	0.0164	0.0014
ARITH. MEAN	: 0.0472	0.1710	0.0667	0.0696	0.0828	0.0059
ARITH. STD. DEV	: 0.0493	0.1113	0.0449	0.0536	0.1642	0.0044
GEOM. MEAN	: 0.0361	0.1489	0.0574	0.0474	0.0431	0.0044
1ST QUARTILE	: 0.0242	0.1062	0.0288	0.0180	0.0266	0.0026
2ND QUARTILE	: 0.0300	0.1429	0.0655	0.0734	0.0375	0.0043
3RD QUARTILE	: 0.0405	0.1708	0.1102	0.1075	0.0453	0.0096
MISSING VALUES	: 0	0	0	0	0	0
	MANGANESE AS MN UG/M3	COPPER AS CU UG/M3	NICKEL AS NI UG/M3	VANADIUM AS V UG/M3	ZINC AS ZN UG/M3	CADMIUM AS CD UG/M3
# OF SAMPLES	: 13	13	13	13	13	13
MAXIMUM	: 0.0040	0.0061	0.0078	0.0027	0.0133	0.00667
MINIMUM	: 0.0008	0.0020	0.0007	0.0001	0.0025	0.00013
ARITH. MEAN	: 0.0023	0.0034	0.0017	0.0005	0.0083	0.00086
ARITH. STD. DEV	: 0.0008	0.0011	0.0019	0.0007	0.0033	0.00176
GEOM. MEAN	: 0.0021	0.0033	0.0013	0.0004	0.0076	0.00040
1ST QUARTILE	: 0.0018	0.0027	0.0010	0.0003	0.0059	0.00016
2ND QUARTILE	: 0.0021	0.0036	0.0012	0.0003	0.0079	0.00038
3RD QUARTILE	: 0.0028	0.0038	0.0013	0.0005	0.0115	0.00060
MISSING VALUES	: 0	0	0	0	0	0

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
SUMMARY STATISTICS OF CONCENTRATION
YEAR 1989

----- STATION=' GOWGANDA LOVOL SITE NO.1' -----
(continued)

	SULFATE NYL AS SO4 UG/M3	ARSENIC AS AS UG/M3	TOTAL SULFUR UG/M**3	TOTAL N NITRATE UG/M**3
# OF SAMPLES	: 13	13	13.00	13.00
MAXIMUM	: 2.1960	0.0055	6.20	0.39
MINIMUM	: 0.6488	0.0009	1.08	0.13
ARITH. MEAN	: 1.4110	0.0020	3.16	0.24
ARITH. STD. DEV	: 0.4321	0.0012	1.46	0.10
GEOM. MEAN	: 1.3461	0.0018	2.87	0.23
1ST QUARTILE	: 1.1992	0.0015	2.26	0.15
2ND QUARTILE	: 1.3187	0.0017	2.56	0.23
3RD QUARTILE	: 1.6688	0.0023	3.55	0.30
MISSING VALUES	: 0	0	0.00	0.00

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ONTARIO MINISTRY OF THE ENVIRONMENT
 APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
 SUMMARY STATISTICS OF CONCENTRATION
 YEAR 1989

----- STATION=' KILLARNEY LOVOL SITE NO.1' -----

	SULFUR DIOXIDE AS SO ₂ UG/M3	SULFATE AS SO ₄ UG/M3	NITRIC AS N UG/M3	NITRATE AS N UG/M3	CALCIUM UG/M3	CHLORIDE UG/M3
# OF SAMPLES	13	13	13	13	13	13
MAXIMUM	34.2448	4.634	0.3606	0.424	0.2012	0.327
MINIMUM	1.4767	0.518	0.0341	0.114	0.0000	0.114
ARITH. MEAN	9.3761	3.015	0.1826	0.245	0.0719	0.198
ARITH. STD. DEV	8.3462	1.286	0.0871	0.104	0.0541	0.066
GEOM. MEAN	6.8456	2.645	0.1606	0.225	0.0759	0.188
1ST QUARTILE	3.9500	1.952	0.1309	0.189	0.0480	0.129
2ND QUARTILE	8.3185	3.408	0.1573	0.209	0.0602	0.195
3RD QUARTILE	10.4756	3.870	0.2342	0.288	0.0748	0.228
MISSING VALUES	0	0	0	0	0	0
	POTASSIUM UG/M3	SODIUM UG/M3	IRON AS FE UG/M3	ALUMINIUM AS AL UG/M3	MAGNESIUM UG/M3	LEAD AS PB UG/M3
# OF SAMPLES	13	13	13	13	13	13
MAXIMUM	0.1044	0.2722	0.1635	0.2012	0.7571	0.0157
MINIMUM	0.0311	0.0695	0.0000	0.0053	0.0218	0.0000
ARITH. MEAN	0.0493	0.1422	0.0681	0.0604	0.0974	0.0068
ARITH. STD. DEV	0.0194	0.0549	0.0571	0.0560	0.1990	0.0039
GEOM. MEAN	0.0466	0.1335	0.0507	0.0405	0.0491	0.0067
1ST QUARTILE	0.0360	0.1044	0.0164	0.0238	0.0324	0.0056
2ND QUARTILE	0.0439	0.1331	0.0514	0.0375	0.0380	0.0060
3RD QUARTILE	0.0566	0.1556	0.0963	0.0674	0.0605	0.0087
MISSING VALUES	0	0	0	0	0	0
	MANGANESE AS MN UG/M3	COPPER AS CU UG/M3	NICKEL AS NI UG/M3	VANADIUM AS V UG/M3	ZINC AS ZN UG/M3	CADMIUM AS CD UG/M3
# OF SAMPLES	13	13	13	13	13	13
MAXIMUM	0.0067	0.0091	0.0084	0.0064	0.0169	0.00914
MINIMUM	0.0010	0.0008	0.0004	0.0001	0.0013	0.00013
ARITH. MEAN	0.0031	0.0041	0.0022	0.0010	0.0092	0.00108
ARITH. STD. DEV	0.0014	0.0022	0.0021	0.0016	0.0047	0.00243
GEOM. MEAN	0.0028	0.0035	0.0017	0.0006	0.0077	0.00048
1ST QUARTILE	0.0022	0.0030	0.0011	0.0004	0.0063	0.00036
2ND QUARTILE	0.0030	0.0036	0.0015	0.0006	0.0087	0.00038
3RD QUARTILE	0.0038	0.0049	0.0024	0.0008	0.0117	0.00050
MISSING VALUES	0	0	0	0	0	0

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
SUMMARY STATISTICS OF CONCENTRATION
YEAR 1989

----- STATION=' KILLARNEY LOVOL SITE NO.1' -----
(continued)

	SULFATE NYL AS SO4 UG/M3	ARSENIC AS AS UG/M3	TOTAL SULFUR UG/M**3	TOTAL N NITRATE UG/M**3
# OF SAMPLES	: 13	13	13.00	13.00
MAXIMUM	: 2.2585	0.0037	18.33	0.75
MINIMUM	: 0.5260	0.0000	0.97	0.15
ARITH. MEAN	: 1.3558	0.0019	5.69	0.43
ARITH. STD. DEV	: 0.4850	0.0010	4.22	0.18
GEOM. MEAN	: 1.2661	0.0019	4.63	0.39
1ST QUARTILE	: 1.1682	0.0013	3.27	0.31
2ND QUARTILE	: 1.3203	0.0019	5.09	0.35
3RD QUARTILE	: 1.7302	0.0024	6.01	0.58
MISSING VALUES	: 0	0	0.00	0.00

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ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
SUMMARY STATISTICS OF CONCENTRATION
YEAR 1989

----- STATION=' MATTAWA LOVOL SITE NO.1' -----

	SULFUR DIOXIDE AS SO ₂ UG/M3	SULFATE AS SO ₄ UG/M3	NITRIC AS N UG/M3	NITRATE AS N UG/M3	CALCIUM UG/M3	CHLORIDE UG/M3
# OF SAMPLES	13	13	13	13	13	13
MAXIMUM	9.9689	4.315	0.1664	0.267	0.5640	0.249
MINIMUM	1.0926	0.454	0.0364	0.031	0.0000	0.070
ARITH. MEAN	4.7908	2.608	0.1078	0.137	0.1276	0.166
ARITH. STD. DEV	2.4762	1.163	0.0414	0.074	0.1784	0.053
GEOM. MEAN	4.1551	2.267	0.0993	0.118	0.0934	0.158
1ST QUARTILE	2.7581	1.927	0.0815	0.096	0.0125	0.124
2ND QUARTILE	5.0369	2.922	0.0998	0.107	0.0664	0.158
3RD QUARTILE	5.5832	3.313	0.1338	0.207	0.1405	0.217
MISSING VALUES	0	0	0	0	0	0
	POTASSIUM UG/M3	SODIUM UG/M3	IRON AS FE UG/M3	ALUMINIUM AS AL UG/M3	MAGNESIUM UG/M3	LEAD AS PB UG/M3
# OF SAMPLES	13	13	13	13	13	13
MAXIMUM	0.1645	0.3269	1.1404	1.0811	0.7150	0.0162
MINIMUM	0.0069	0.0825	0.0227	0.0135	0.0155	0.0003
ARITH. MEAN	0.0580	0.1635	0.3080	0.2612	0.1672	0.0062
ARITH. STD. DEV	0.0382	0.0640	0.3792	0.3617	0.2166	0.0045
GEOM. MEAN	0.0471	0.1533	0.1637	0.1107	0.0828	0.0044
1ST QUARTILE	0.0468	0.1287	0.0754	0.0320	0.0395	0.0033
2ND QUARTILE	0.0493	0.1475	0.1870	0.1185	0.0592	0.0053
3RD QUARTILE	0.0594	0.1974	0.2147	0.1513	0.1911	0.0079
MISSING VALUES	0	0	0	0	0	0
	MANGANESE AS MN UG/M3	COPPER AS CU UG/M3	NICKEL AS NI UG/M3	VANADIUM AS V UG/M3	ZINC AS ZN UG/M3	CADMIUM AS CD UG/M3
# OF SAMPLES	13	13	13	13	13	13
MAXIMUM	0.0345	0.0042	0.0019	0.0021	0.0215	0.00081
MINIMUM	0.0014	0.0007	0.0000	0.0001	0.0010	0.00013
ARITH. MEAN	0.0086	0.0027	0.0010	0.0008	0.0110	0.00036
ARITH. STD. DEV	0.0099	0.0010	0.0005	0.0006	0.0056	0.00024
GEOM. MEAN	0.0056	0.0025	0.0010	0.0007	0.0090	0.00030
1ST QUARTILE	0.0036	0.0024	0.0007	0.0006	0.0083	0.00016
2ND QUARTILE	0.0052	0.0026	0.0010	0.0007	0.0119	0.00029
3RD QUARTILE	0.0059	0.0033	0.0014	0.0010	0.0131	0.00054
MISSING VALUES	0	0	0	0	0	0

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
SUMMARY STATISTICS OF CONCENTRATION
YEAR 1989

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----- STATION=' MATTAWA LOVOL SITE NO.1' -----

(continued)

	SULFATE NYL. AS SO ₄ UG/M3	ARSENIC AS AS UG/M3	TOTAL SULFUR UG/M**3	TOTAL N NITRATE UG/M**3
# OF SAMPLES	: 13	13	13.00	13.00
MAXIMUM	: 1.8651	0.0036	5.63	0.43
MINIMUM	: 0.4455	0.0003	1.52	0.11
ARITH. MEAN	: 1.1758	0.0021	3.26	0.25
ARITH. STD. DEV	: 0.4355	0.0011	1.24	0.11
GEOM. MEAN	: 1.0946	0.0017	3.03	0.22
1ST QUARTILE	: 0.9251	0.0012	2.30	0.16
2ND QUARTILE	: 1.0291	0.0018	3.28	0.20
3RD QUARTILE	: 1.4803	0.0027	3.96	0.34
MISSING VALUES	: 0	0	0.00	0.00

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ONTARIO MINISTRY OF THE ENVIRONMENT
 APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
 SUMMARY STATISTICS OF CONCENTRATION
 YEAR 1989

----- STATION=' MCKELLAR LOVOL SITE NO.1' -----

	SULFUR DIOXIDE	SULFATE	NITRIC	NITRATE	CALCIUM	CHLORIDE
	AS SO ₂ UG/M3	AS SO ₄ UG/M3	AS N UG/M3	AS N UG/M3	UG/M3	UG/M3
# OF SAMPLES	: 12	12	12	12	12	12
MAXIMUM	: 11.4458	8.525	2.7541	2.951	0.1558	5.246
MINIMUM	: 0.0000	1.251	0.0982	0.094	0.0000	0.110
ARITH. MEAN	: 4.6729	3.227	0.3868	0.435	0.0747	0.631
ARITH. STD. DEV	: 3.0423	1.883	0.7500	0.801	0.0572	1.458
GEOM. MEAN	: 4.5043	2.872	0.1984	0.225	0.0908	0.245
1ST QUARTILE	: 2.9735	2.504	0.1175	0.120	0.0166	0.126
2ND QUARTILE	: 3.9927	2.836	0.1337	0.161	0.0766	0.164
3RD QUARTILE	: 6.1984	3.074	0.2619	0.336	0.1205	0.343
MISSING VALUES	: 0	0	0	0	0	0
	POTASSIUM UG/M3	SODIUM UG/M3	IRON AS FE UG/M3	ALUMINIUM AS AL UG/M3	MAGNESIUM UG/M3	LEAD AS PB UG/M3
# OF SAMPLES	: 12	12	12	12	12	12
MAXIMUM	: 0.3279	3.1148	0.5770	0.1967	0.3541	0.0132
MINIMUM	: 0.0200	0.0661	0.0063	0.0168	0.0171	0.0000
ARITH. MEAN	: 0.0619	0.4181	0.1129	0.0755	0.0623	0.0051
ARITH. STD. DEV	: 0.0853	0.8579	0.1500	0.0576	0.0928	0.0038
GEOM. MEAN	: 0.0419	0.1812	0.0682	0.0577	0.0404	0.0047
1ST QUARTILE	: 0.0253	0.0837	0.0591	0.0331	0.0256	0.0024
2ND QUARTILE	: 0.0351	0.1363	0.0788	0.0566	0.0380	0.0041
3RD QUARTILE	: 0.0483	0.3086	0.0929	0.1038	0.0466	0.0066
MISSING VALUES	: 0	0	0	0	0	0
	MANGANESE AS MN UG/M3	COPPER AS CU UG/M3	NICKEL AS NI UG/M3	VANADIUM AS V UG/M3	ZINC AS ZN UG/M3	CADMIUM AS CD UG/M3
# OF SAMPLES	: 12	12	12	12	12	12
MAXIMUM	: 0.0197	0.0262	0.0197	0.0010	0.0787	0.00068
MINIMUM	: 0.0014	0.0000	0.0005	0.0000	0.0050	0.00000
ARITH. MEAN	: 0.0044	0.0045	0.0025	0.0004	0.0139	0.00021
ARITH. STD. DEV	: 0.0049	0.0071	0.0054	0.0003	0.0206	0.00019
GEOM. MEAN	: 0.0033	0.0030	0.0011	0.0004	0.0091	0.00019
1ST QUARTILE	: 0.0024	0.0018	0.0007	0.0003	0.0055	0.00011
2ND QUARTILE	: 0.0031	0.0023	0.0008	0.0004	0.0081	0.00012
3RD QUARTILE	: 0.0039	0.0024	0.0011	0.0006	0.0095	0.00031
MISSING VALUES	: 0	0	0	0	0	0

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ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
SUMMARY STATISTICS OF CONCENTRATION
YEAR 1989

----- STATION=' MCKELLAR LOVOL SITE NO.1' -----
(continued)

	SULFATE NYL AS SO4 UG/M3	ARSENIC AS AS UG/M3	TOTAL SULFUR UG/M**3	TOTAL N NITRATE UG/M**3
# OF SAMPLES	12	12	12.00	12.00
MAXIMUM	40.6557	0.0024	6.58	5.70
MINIMUM	0.9638	0.0000	1.95	0.20
ARITH. MEAN	4.8842	0.0012	3.41	0.82
ARITH. STD. DEV	11.2803	0.0007	1.27	1.55
GEOM. MEAN	2.0289	0.0012	3.23	0.43
1ST QUARTILE	1.2845	0.0008	2.61	0.25
2ND QUARTILE	1.5176	0.0009	3.01	0.30
3RD QUARTILE	2.0056	0.0018	4.01	0.63
MISSING VALUES	0	0	0.00	0.00

ONTARIO MINISTRY OF THE ENVIRONMENT
 APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
 SUMMARY STATISTICS OF CONCENTRATION
 YEAR 1989

----- STATION=' MOONBEAM LOVOL SITE NO.1' -----

	SULFUR DIOXIDE	SULFATE	NITRIC	NITRATE	CALCIUM	CHLORIDE
	AS SO ₂ UG/M3	AS SO ₄ UG/M3	AS N UG/M3	AS N UG/M3	UG/M3	UG/M3
# OF SAMPLES	: 13	13	13	13	13	13
MAXIMUM	: 4.3662	6.500	0.1256	0.332	1.9204	0.886
MINIMUM	: 0.6689	1.076	0.0270	0.051	0.0253	0.116
ARITH. MEAN	: 2.0374	2.093	0.0642	0.114	0.4288	0.238
ARITH. STD. DEV	: 1.1496	1.427	0.0282	0.072	0.6091	0.206
GEOM. MEAN	: 1.7380	1.835	0.0586	0.100	0.1945	0.197
1ST QUARTILE	: 1.3802	1.346	0.0471	0.078	0.0878	0.142
2ND QUARTILE	: 2.0114	1.479	0.0603	0.096	0.1232	0.180
3RD QUARTILE	: 2.4402	2.198	0.0713	0.128	0.4107	0.212
MISSING VALUES	: 0	0	0	0	0	0
	POTASSIUM	SODIUM	IRON AS FE UG/M3	ALUMINIUM AS AL UG/M3	MAGNESIUM	LEAD AS PB UG/M3
# OF SAMPLES	: 13	13	13	13	13	13
MAXIMUM	: 0.1662	0.3878	0.6278	0.8863	1.3919	0.0133
MINIMUM	: 0.0169	0.0841	0.0000	0.0135	0.0202	0.0000
ARITH. MEAN	: 0.0461	0.1709	0.1580	0.1917	0.2286	0.0035
ARITH. STD. DEV	: 0.0383	0.0874	0.1754	0.2441	0.3795	0.0039
GEOM. MEAN	: 0.0380	0.1557	0.1112	0.0906	0.1016	0.0035
1ST QUARTILE	: 0.0293	0.1172	0.0397	0.0291	0.0422	0.0012
2ND QUARTILE	: 0.0372	0.1447	0.1035	0.1056	0.0826	0.0025
3RD QUARTILE	: 0.0485	0.1772	0.1887	0.2516	0.1258	0.0042
MISSING VALUES	: 0	0	0	0	0	0
	MANGANESE AS MN UG/M3	COPPER AS CU UG/M3	NICKEL AS NI UG/M3	VANADIUM AS V UG/M3	ZINC AS ZN UG/M3	CADMIUM AS CD UG/M3
# OF SAMPLES	: 13	13	13	13	13	13
MAXIMUM	: 0.0185	0.0052	0.0022	0.0035	0.0148	0.00302
MINIMUM	: 0.0012	0.0012	0.0000	0.0001	0.0014	0.00000
ARITH. MEAN	: 0.0048	0.0026	0.0008	0.0008	0.0083	0.00051
ARITH. STD. DEV	: 0.0047	0.0012	0.0006	0.0010	0.0047	0.00079
GEOM. MEAN	: 0.0036	0.0024	0.0008	0.0005	0.0069	0.00032
1ST QUARTILE	: 0.0021	0.0021	0.0005	0.0003	0.0049	0.00013
2ND QUARTILE	: 0.0034	0.0023	0.0007	0.0004	0.0062	0.00030
3RD QUARTILE	: 0.0042	0.0030	0.0008	0.0006	0.0124	0.00048
MISSING VALUES	: 0	0	0	0	0	0

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
SUMMARY STATISTICS OF CONCENTRATION
YEAR 1989

----- STATION=' MOONBEAM LOVOL SITE NO.1' -----
(continued)

	SULFATE NYL AS SO4 UG/M3	ARSENIC AS AS UG/M3	TOTAL SULFUR UG/M**3	TOTAL N NITRATE UG/M**3
# OF SAMPLES	:	13	13.00	13.00
MAXIMUM	:	2.8067	0.0025	0.46
MINIMUM	:	0.6219	0.0004	0.08
ARITH. MEAN	:	1.1723	0.0011	0.18
ARITH. STD. DEV	:	0.5906	0.0007	0.10
GEOM. MEAN	:	1.0674	0.0009	0.16
1ST QUARTILE	:	0.7863	0.0005	0.12
2ND QUARTILE	:	1.0844	0.0010	0.15
3RD QUARTILE	:	1.4293	0.0015	0.20
MISSING VALUES	:	0	0.00	0.00

ONTARIO MINISTRY OF THE ENVIRONMENT
 APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
 SUMMARY STATISTICS OF CONCENTRATION
 YEAR 1989

----- STATION=' MOOSONEE LOVOL SITE NO.1' -----

	SULFUR DIOXIDE	SULFATE	NITRIC	NITRATE	CALCIUM	CHLORIDE
	AS SO ₂ UG/M3	AS SO ₄ UG/M3	AS N UG/M3	AS N UG/M3	UG/M3	UG/M3
# OF SAMPLES	11	11	11	11	11	11
MAXIMUM	2.1698	1.656	0.0668	0.102	0.4419	0.500
MINIMUM	0.0000	0.442	0.0186	0.018	0.0000	0.097
ARITH. MEAN	0.8537	1.014	0.0357	0.050	0.1222	0.283
ARITH. STD. DEV	0.7344	0.457	0.0146	0.032	0.1398	0.135
GEOM. MEAN	0.7087	0.915	0.0332	0.041	0.1139	0.253
1ST QUARTILE	0.2259	0.574	0.0265	0.021	0.0000	0.180
2ND QUARTILE	0.7016	0.927	0.0308	0.039	0.0999	0.220
3RD QUARTILE	1.1152	1.441	0.0494	0.087	0.2035	0.405
MISSING VALUES	0	0	0	0	0	0
	POTASSIUM UG/M3	SODIUM UG/M3	IRON AS FE UG/M3	ALUMINIUM AS AL UG/M3	MAGNESIUM UG/M3	LEAD AS PB UG/M3
# OF SAMPLES	11	11	11	11	11	11
MAXIMUM	0.0941	0.3399	0.5386	0.0870	1.1102	0.0072
MINIMUM	0.0000	0.1146	0.0122	0.0112	0.0275	0.0000
ARITH. MEAN	0.0244	0.2254	0.0895	0.0322	0.2053	0.0014
ARITH. STD. DEV	0.0251	0.0690	0.1513	0.0232	0.3348	0.0022
GEOM. MEAN	0.0207	0.2155	0.0475	0.0259	0.0885	0.0024
1ST QUARTILE	0.0088	0.1696	0.0251	0.0136	0.0344	0.0000
2ND QUARTILE	0.0198	0.2230	0.0373	0.0276	0.0565	0.0000
3RD QUARTILE	0.0260	0.2774	0.0772	0.0485	0.2486	0.0018
MISSING VALUES	0	0	0	0	0	0
	MANGANESE AS MN UG/M3	COPPER AS CU UG/M3	NICKEL AS NI UG/M3	VANADIUM AS V UG/M3	ZINC AS ZN UG/M3	CADMIUM AS CD UG/M3
# OF SAMPLES	11	11	11	11	11	11
MAXIMUM	0.0068	0.0105	0.0221	0.0018	0.0276	0.00207
MINIMUM	0.0009	0.0006	0.0000	0.0000	0.0012	0.00000
ARITH. MEAN	0.0019	0.0033	0.0023	0.0005	0.0061	0.00049
ARITH. STD. DEV	0.0017	0.0038	0.0066	0.0006	0.0078	0.00077
GEOM. MEAN	0.0016	0.0018	0.0011	0.0004	0.0037	0.00061
1ST QUARTILE	0.0011	0.0007	0.0000	0.0002	0.0020	0.00000
2ND QUARTILE	0.0013	0.0011	0.0003	0.0002	0.0028	0.00028
3RD QUARTILE	0.0018	0.0076	0.0008	0.0008	0.0091	0.00047
MISSING VALUES	0	0	0	0	0	0

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
SUMMARY STATISTICS OF CONCENTRATION
YEAR 1989

----- STATION=' MOOSONEE LOVOL SITE NO.1' -----
(continued)

	SULFATE NYL AS SO4 UG/M3	ARSENIC AS AS UG/M3	TOTAL SULFUR UG/M**3	TOTAL N NITRATE UG/M**3
# OF SAMPLES	: 11	11	11.00	11.00
MAXIMUM	: 1.6997	0.0193	1.54	0.16
MINIMUM	: 0.2042	0.0000	0.15	0.04
ARITH. MEAN	: 0.7050	0.0023	0.76	0.09
ARITH. STD. DEV	: 0.4992	0.0057	0.46	0.04
GEOM. MEAN	: 0.5775	0.0010	0.62	0.08
1ST QUARTILE	: 0.3979	0.0003	0.29	0.04
2ND QUARTILE	: 0.5405	0.0005	0.79	0.08
3RD QUARTILE	: 0.8411	0.0014	0.97	0.13
MISSING VALUES	: 0	0	0.00	0.00

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ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
SUMMARY STATISTICS OF CONCENTRATION
YEAR 1989

----- STATION=' PALMERSTON LOVOL SITE NO.1' -----

	SULFUR DIOXIDE AS SO ₂ UG/M3	SULFATE AS SO ₄ UG/M3	NITRIC AS N UG/M3	NITRATE AS N UG/M3	CALCIUM UG/M3	CHLORIDE UG/M3
# OF SAMPLES	13	13	13	13	13	13
MAXIMUM	13.2753	9.092	0.3194	1.472	1.0325	0.742
MINIMUM	2.6827	2.492	0.1363	0.630	0.1211	0.278
ARITH. MEAN	6.9570	4.691	0.2098	0.937	0.5616	0.414
ARITH. STD. DEV	3.2331	1.811	0.0585	0.256	0.2550	0.144
GEOM. MEAN	6.2711	4.409	0.2022	0.906	0.4943	0.394
1ST QUARTILE	4.4859	3.268	0.1465	0.702	0.3958	0.338
2ND QUARTILE	6.1530	4.430	0.2014	0.977	0.5332	0.341
3RD QUARTILE	9.4260	5.380	0.2476	1.114	0.7742	0.454
MISSING VALUES	0	0	0	0	0	0
	POTASSIUM UG/M3	SODIUM UG/M3	IRON AS FE UG/M3	ALUMINIUM AS AL UG/M3	MAGNESIUM UG/M3	LEAD AS PB UG/M3
# OF SAMPLES	13	13	13	13	13	13
MAXIMUM	0.0927	0.4046	0.3156	0.2592	0.3839	0.0191
MINIMUM	0.0182	0.0886	0.0529	0.0472	0.0882	0.0017
ARITH. MEAN	0.0589	0.1723	0.1480	0.1302	0.1925	0.0088
ARITH. STD. DEV	0.0223	0.0894	0.0840	0.0745	0.0907	0.0053
GEOM. MEAN	0.0543	0.1556	0.1293	0.1117	0.1737	0.0072
1ST QUARTILE	0.0473	0.1059	0.0970	0.0779	0.1328	0.0062
2ND QUARTILE	0.0563	0.1634	0.1135	0.0966	0.1777	0.0081
3RD QUARTILE	0.0755	0.1985	0.1706	0.1968	0.2493	0.0108
MISSING VALUES	0	0	0	0	0	0
	MANGANESE AS MN UG/M3	COPPER AS CU UG/M3	NICKEL AS NI UG/M3	VANADIUM AS V UG/M3	ZINC AS ZN UG/M3	CADMIUM AS CD UG/M3
# OF SAMPLES	13	13	13	13	13	13
MAXIMUM	0.0118	0.0030	0.0020	0.0019	0.0243	0.00101
MINIMUM	0.0038	0.0015	0.0006	0.0005	0.0102	0.00012
ARITH. MEAN	0.0073	0.0023	0.0012	0.0012	0.0181	0.00046
ARITH. STD. DEV	0.0026	0.0004	0.0004	0.0005	0.0044	0.00027
GEOM. MEAN	0.0069	0.0022	0.0011	0.0011	0.0176	0.00038
1ST QUARTILE	0.0048	0.0020	0.0010	0.0009	0.0153	0.00026
2ND QUARTILE	0.0069	0.0024	0.0012	0.0012	0.0189	0.00038
3RD QUARTILE	0.0091	0.0025	0.0014	0.0013	0.0214	0.00066
MISSING VALUES	0	0	0	0	0	0

ONTARIO MINISTRY OF THE ENVIRONMENT
 APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
 SUMMARY STATISTICS OF CONCENTRATION
 YEAR 1989

----- STATION=' PALMERSTON LOVOL SITE NO.1' -----
 (continued)

	SULFATE NYL AS SO4 UG/M3	ARSENIC AS AS UG/M3	TOTAL SULFUR UG/M**3	TOTAL N NITRATE UG/M**3
# OF SAMPLES	: 13	: 13	: 13.00	: 13.00
MAXIMUM	: 1.9977	: 0.0019	: 7.80	: 1.70
MINIMUM	: 0.7769	: 0.0005	: 3.07	: 0.77
ARITH. MEAN	: 1.1406	: 0.0012	: 5.04	: 1.15
ARITH. STD. DEV	: 0.3851	: 0.0005	: 1.50	: 0.26
GEOM. MEAN	: 1.0905	: 0.0011	: 4.84	: 1.12
1ST QUARTILE	: 0.8617	: 0.0008	: 3.90	: 0.90
2ND QUARTILE	: 0.9834	: 0.0013	: 5.12	: 1.16
3RD QUARTILE	: 1.2285	: 0.0014	: 6.56	: 1.30
MISSING VALUES	: 0	: 0	: 0.00	: 0.00

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ONTARIO MINISTRY OF THE ENVIRONMENT
 APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
 SUMMARY STATISTICS OF CONCENTRATION
 YEAR 1989

----- STATION=' PICKLE LAKE LOVOL SITE NO.1' -----

	SULFUR DIOXIDE AS SO ₂ UG/M3	SULFATE AS SO ₄ UG/M3	NITRIC AS N UG/M3	NITRATE AS N UG/M3	CALCIUM UG/M3	CHLORIDE UG/M3
# OF SAMPLES	13	13	13	13	13	13
MAXIMUM	3.1209	2.177	0.0890	0.110	1.4398	0.350
MINIMUM	0.1933	0.444	0.0257	0.030	0.0000	0.092
ARITH. MEAN	0.9565	0.989	0.0500	0.058	0.4754	0.194
ARITH. STD. DEV	0.9777	0.456	0.0198	0.026	0.4745	0.080
GEOM. MEAN	0.6294	0.910	0.0468	0.053	0.2450	0.180
1ST QUARTILE	0.3073	0.719	0.0404	0.036	0.0380	0.141
2ND QUARTILE	0.4757	0.830	0.0439	0.056	0.4198	0.165
3RD QUARTILE	1.0330	1.128	0.0572	0.075	0.8360	0.241
MISSING VALUES	0	0	0	0	0	0
	POTASSIUM UG/M3	SODIUM UG/M3	IRON AS FE UG/M3	ALUMINIUM AS AL UG/M3	MAGNESIUM UG/M3	LEAD AS PB UG/M3
# OF SAMPLES	13	13	13	13	13	13
MAXIMUM	0.0801	0.3276	0.3602	0.3859	0.2316	0.0168
MINIMUM	0.0061	0.0880	0.0000	0.0092	0.0171	0.0000
ARITH. MEAN	0.0309	0.1586	0.1299	0.1348	0.1010	0.0067
ARITH. STD. DEV	0.0215	0.0749	0.1254	0.1313	0.0754	0.0050
GEOM. MEAN	0.0243	0.1457	0.1032	0.0690	0.0710	0.0053
1ST QUARTILE	0.0165	0.1084	0.0276	0.0219	0.0275	0.0020
2ND QUARTILE	0.0258	0.1444	0.1101	0.1287	0.1035	0.0058
3RD QUARTILE	0.0450	0.1584	0.2186	0.2256	0.1415	0.0098
MISSING VALUES	0	0	0	0	0	0
	MANGANESE AS MN UG/M3	COPPER AS CU UG/M3	NICKEL AS NI UG/M3	VANADIUM AS V UG/M3	ZINC AS ZN UG/M3	CADMIUM AS CD UG/M3
# OF SAMPLES	13	13	13	13	13	13
MAXIMUM	0.0085	0.0099	0.0048	0.0008	0.0089	0.00036
MINIMUM	0.0006	0.0000	0.0004	0.0000	0.0008	0.00000
ARITH. MEAN	0.0041	0.0036	0.0014	0.0004	0.0041	0.00010
ARITH. STD. DEV	0.0029	0.0034	0.0012	0.0002	0.0022	0.00015
GEOM. MEAN	0.0029	0.0026	0.0011	0.0004	0.0034	0.00025
1ST QUARTILE	0.0013	0.0012	0.0007	0.0003	0.0024	0.00000
2ND QUARTILE	0.0039	0.0015	0.0010	0.0003	0.0039	0.00000
3RD QUARTILE	0.0066	0.0051	0.0017	0.0005	0.0049	0.00017
MISSING VALUES	0	0	0	0	0	0

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
SUMMARY STATISTICS OF CONCENTRATION
YEAR 1989

----- STATION=' PICKLE LAKE LOVOL SITE NO.1' -----

(continued)

	SULFATE NYL AS SO4 UG/M3	ARSENIC AS AS UG/M3	TOTAL SULFUR UG/M**3	TOTAL N NITRATE UG/M**3
# OF SAMPLES	: 13	13	13.00	13.00
MAXIMUM	: 0.6693	0.0029	2.04	0.20
MINIMUM	: 0.1816	0.0000	0.24	0.06
ARITH. MEAN	: 0.4340	0.0007	0.81	0.11
ARITH. STD. DEV	: 0.1569	0.0009	0.62	0.04
GEOM. MEAN	: 0.4032	0.0007	0.65	0.10
1ST QUARTILE	: 0.2760	0.0002	0.42	0.08
2ND QUARTILE	: 0.5037	0.0004	0.54	0.10
3RD QUARTILE	: 0.5500	0.0011	0.76	0.12
MISSING VALUES	: 0	0	0.00	0.00

ONTARIO MINISTRY OF THE ENVIRONMENT
 APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
 SUMMARY STATISTICS OF CONCENTRATION
 YEAR 1989

----- STATION=' PORT STANLEY LOVOL SITE NO.1' -----

	SULFUR DIOXIDE AS SO ₂ UG/M3	SULFATE AS SO ₄ UG/M3	NITRIC AS N UG/M3	NITRATE AS N UG/M3	CALCIUM UG/M3	CHLORIDE UG/M3
# OF SAMPLES	: 13	13	13	13	13	13
MAXIMUM	: 24.0961	13.572	0.5897	1.141	0.9469	1.006
MINIMUM	: 5.8124	2.559	0.1665	0.638	0.1964	0.339
ARITH. MEAN	: 11.6882	5.550	0.3318	0.909	0.5072	0.520
ARITH. STD. DEV	: 5.5900	2.839	0.1086	0.167	0.2449	0.208
GEOM. MEAN	: 10.6068	5.055	0.3159	0.895	0.4548	0.488
1ST QUARTILE	: 7.6525	3.946	0.2690	0.766	0.2899	0.370
2ND QUARTILE	: 10.0214	5.061	0.3102	0.915	0.4592	0.408
3RD QUARTILE	: 13.9975	6.027	0.3957	1.047	0.6793	0.603
MISSING VALUES	: 0	0	0	0	0	0
	POTASSIUM UG/M3	SODIUM UG/M3	IRON AS FE UG/M3	ALUMINIUM AS AL UG/M3	MAGNESIUM UG/M3	LEAD AS PB UG/M3
# OF SAMPLES	: 13	13	13	13	13	13
MAXIMUM	: 0.1363	0.5145	0.4017	0.3443	0.2181	0.0256
MINIMUM	: 0.0430	0.1193	0.1006	0.0703	0.0703	0.0039
ARITH. MEAN	: 0.0685	0.2418	0.2100	0.1670	0.1194	0.0123
ARITH. STD. DEV	: 0.0264	0.1174	0.0892	0.0841	0.0505	0.0060
GEOM. MEAN	: 0.0645	0.2202	0.1937	0.1482	0.1105	0.0109
1ST QUARTILE	: 0.0487	0.1686	0.1585	0.0918	0.0759	0.0099
2ND QUARTILE	: 0.0588	0.2117	0.2122	0.1724	0.1086	0.0123
3RD QUARTILE	: 0.0825	0.2444	0.2440	0.2221	0.1568	0.0138
MISSING VALUES	: 0	0	0	0	0	0
	MANGANESE AS MN UG/M3	COPPER AS CU UG/M3	NICKEL AS NI UG/M3	VANADIUM AS V UG/M3	ZINC AS ZN UG/M3	CADMIUM AS CD UG/M3
# OF SAMPLES	: 13	13	13	13	13	13
MAXIMUM	: 0.0187	0.0167	0.0032	0.0036	0.2009	0.00088
MINIMUM	: 0.0063	0.0021	0.0009	0.0007	0.0156	0.00023
ARITH. MEAN	: 0.0106	0.0044	0.0016	0.0017	0.0423	0.00055
ARITH. STD. DEV	: 0.0037	0.0038	0.0006	0.0007	0.0486	0.00023
GEOM. MEAN	: 0.0100	0.0037	0.0015	0.0015	0.0320	0.00050
1ST QUARTILE	: 0.0070	0.0027	0.0013	0.0011	0.0244	0.00032
2ND QUARTILE	: 0.0116	0.0033	0.0016	0.0017	0.0276	0.00064
3RD QUARTILE	: 0.0124	0.0041	0.0017	0.0020	0.0379	0.00072
MISSING VALUES	: 0	0	0	0	0	0

ONTARIO MINISTRY OF THE ENVIRONMENT
 APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
 SUMMARY STATISTICS OF CONCENTRATION
 YEAR 1989

----- STATION=' PORT STANLEY LOVOL SITE NO.1' -----
 (continued)

	SULFATE NYL AS SO4 UG/M3	ARSENIC AS AS UG/M3	TOTAL SULFUR UG/M**3	TOTAL N NITRATE UG/M**3
# OF SAMPLES	13	13	13.00	13.00
MAXIMUM	2.5423	0.0021	13.40	1.64
MINIMUM	0.9105	0.0006	5.17	0.88
ARITH. MEAN	1.2905	0.0015	7.69	1.24
ARITH. STD. DEV	0.4580	0.0005	2.50	0.23
GEOM. MEAN	1.2327	0.0014	7.36	1.22
1ST QUARTILE	1.0271	0.0013	5.67	1.08
2ND QUARTILE	1.1449	0.0017	6.63	1.31
3RD QUARTILE	1.3636	0.0019	8.59	1.35
MISSING VALUES	0	0	0.00	0.00

ONTARIO MINISTRY OF THE ENVIRONMENT
 APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
 SUMMARY STATISTICS OF CONCENTRATION
 YEAR 1989

----- STATION=' QUETICO CENTRE LOVOL SITE NO.1' -----

	SULFUR DIOXIDE AS SO ₂ UG/M3	SULFATE AS SO ₄ UG/M3	NITRIC AS N UG/M3	NITRATE AS N UG/M3	CALCIUM UG/M3	CHLORIDE UG/M3
# OF SAMPLES	13	13	13	13	13	13
MAXIMUM	2.8886	2.257	0.0831	0.158	0.2967	0.209
MINIMUM	0.3075	0.569	0.0259	0.055	0.0000	0.095
ARITH. MEAN	1.0127	1.277	0.0583	0.100	0.1205	0.143
ARITH. STD. DEV	0.7735	0.486	0.0149	0.036	0.0857	0.041
GEOM. MEAN	0.8018	1.184	0.0562	0.094	0.1068	0.138
1ST QUARTILE	0.4516	1.079	0.0517	0.071	0.0491	0.113
2ND QUARTILE	0.6716	1.289	0.0588	0.082	0.1059	0.135
3RD QUARTILE	1.1467	1.616	0.0659	0.137	0.1703	0.185
MISSING VALUES	0	0	0	0	0	0
	POTASSIUM UG/M3	SODIUM UG/M3	IRON AS FE UG/M3	ALUMINIUM AS AL UG/M3	MAGNESIUM UG/M3	LEAD AS PB UG/M3
# OF SAMPLES	13	13	13	13	13	13
MAXIMUM	0.0846	0.1817	0.1818	0.1333	0.0617	0.0069
MINIMUM	0.0037	0.0663	0.0226	0.0168	0.0181	0.0004
ARITH. MEAN	0.0311	0.1106	0.0658	0.0565	0.0383	0.0031
ARITH. STD. DEV	0.0225	0.0348	0.0431	0.0343	0.0123	0.0022
GEOM. MEAN	0.0237	0.1060	0.0562	0.0478	0.0364	0.0023
1ST QUARTILE	0.0201	0.0882	0.0404	0.0327	0.0286	0.0017
2ND QUARTILE	0.0242	0.0995	0.0435	0.0441	0.0393	0.0020
3RD QUARTILE	0.0380	0.1293	0.0909	0.0730	0.0448	0.0048
MISSING VALUES	0	0	0	0	0	0
	MANGANESE AS MN UG/M3	COPPER AS CU UG/M3	NICKEL AS NI UG/M3	VANADIUM AS V UG/M3	ZINC AS ZN UG/M3	CADMIUM AS CD UG/M3
# OF SAMPLES	13	13	13	13	13	13
MAXIMUM	0.0046	0.0012	0.0168	0.0005	0.0075	0.00024
MINIMUM	0.0014	0.0000	0.0000	0.0000	0.0014	0.00000
ARITH. MEAN	0.0030	0.0008	0.0020	0.0002	0.0039	0.00009
ARITH. STD. DEV	0.0011	0.0004	0.0045	0.0001	0.0016	0.00008
GEOM. MEAN	0.0028	0.0009	0.0012	0.0002	0.0036	0.00014
1ST QUARTILE	0.0021	0.0005	0.0006	0.0001	0.0030	0.00000
2ND QUARTILE	0.0030	0.0009	0.0008	0.0003	0.0038	0.00012
3RD QUARTILE	0.0042	0.0011	0.0013	0.0003	0.0045	0.00013
MISSING VALUES	0	0	0	0	0	0

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
SUMMARY STATISTICS OF CONCENTRATION
YEAR 1989

----- STATION=' QUETICO CENTRE LOVOL SITE NO.1' -----
(continued)

	SULFATE NYL AS SO4 UG/M3	ARSENIC AS AS UG/M3	TOTAL SULFUR UG/M**3	TOTAL N NITRATE UG/M**3
# OF SAMPLES	: 13	13	13.00	13.00
MAXIMUM	: 0.7039	0.0014	1.98	0.23
MINIMUM	: 0.2666	0.0000	0.37	0.10
ARITH. MEAN	: 0.4453	0.0007	0.93	0.16
ARITH. STD. DEV	: 0.1354	0.0004	0.45	0.05
GEOM. MEAN	: 0.4269	0.0008	0.84	0.15
1ST QUARTILE	: 0.3276	0.0005	0.66	0.12
2ND QUARTILE	: 0.4107	0.0007	0.80	0.14
3RD QUARTILE	: 0.5437	0.0009	1.22	0.20
MISSING VALUES	: 0	0	0.00	0.00

ONTARIO MINISTRY OF THE ENVIRONMENT
 APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
 SUMMARY STATISTICS OF CONCENTRATION
 YEAR 1989

----- STATION=' SHALLOW LAKE LOVOL SITE NO.1' -----

	SULFUR DIOXIDE AS SO ₂ UG/M3	SULFATE AS SO ₄ UG/M3	NITRIC AS N UG/M3	NITRATE AS N UG/M3	CALCIUM UG/M3	CHLORIDE UG/M3
# OF SAMPLES	: 10	10	10	10	10	10
MAXIMUM	: 9.2611	5.748	0.3029	1.000	0.6044	0.309
MINIMUM	: 1.3145	2.079	0.1296	0.271	0.0653	0.191
ARITH. MEAN	: 4.3127	4.051	0.1909	0.486	0.3256	0.241
ARITH. STD. DEV	: 2.8880	1.360	0.0637	0.244	0.1492	0.040
GEOM. MEAN	: 3.5255	3.828	0.1824	0.440	0.2858	0.238
1ST QUARTILE	: 2.2838	2.629	0.1416	0.282	0.2439	0.215
2ND QUARTILE	: 3.3407	4.092	0.1601	0.456	0.3111	0.231
3RD QUARTILE	: 7.0766	5.418	0.2315	0.520	0.4250	0.272
MISSING VALUES	: 0	0	0	0	0	0
	POTASSIUM UG/M3	SODIUM UG/M3	IRON AS FE UG/M3	ALUMINIUM AS AL UG/M3	MAGNESIUM UG/M3	LEAD AS PB UG/M3
# OF SAMPLES	: 10	10	10	10	10	10
MAXIMUM	: 0.2069	1.9909	0.3084	0.3454	0.2220	0.0100
MINIMUM	: 0.0185	0.1003	0.0082	0.0242	0.0387	0.0001
ARITH. MEAN	: 0.0737	0.4703	0.1165	0.1275	0.1128	0.0047
ARITH. STD. DEV	: 0.0580	0.5658	0.0811	0.0937	0.0528	0.0033
GEOM. MEAN	: 0.0578	0.3113	0.0873	0.0999	0.1013	0.0031
1ST QUARTILE	: 0.0337	0.1909	0.0638	0.0628	0.0792	0.0028
2ND QUARTILE	: 0.0524	0.2319	0.1022	0.1039	0.1116	0.0041
3RD QUARTILE	: 0.1000	0.5504	0.1500	0.1710	0.1459	0.0068
MISSING VALUES	: 0	0	0	0	0	0
	MANGANESE AS MN UG/M3	COPPER AS CU UG/M3	NICKEL AS NI UG/M3	VANADIUM AS V UG/M3	ZINC AS ZN UG/M3	CADMIUM AS CD UG/M3
# OF SAMPLES	: 10	10	10	10	10	10
MAXIMUM	: 0.0136	0.0055	0.0017	0.0012	0.0184	0.00039
MINIMUM	: 0.0021	0.0012	0.0008	0.0005	0.0081	0.00012
ARITH. MEAN	: 0.0059	0.0030	0.0012	0.0009	0.0114	0.00026
ARITH. STD. DEV	: 0.0034	0.0013	0.0003	0.0002	0.0029	0.00009
GEOM. MEAN	: 0.0051	0.0027	0.0011	0.0008	0.0111	0.00025
1ST QUARTILE	: 0.0035	0.0021	0.0010	0.0008	0.0088	0.00024
2ND QUARTILE	: 0.0050	0.0026	0.0012	0.0009	0.0115	0.00026
3RD QUARTILE	: 0.0079	0.0039	0.0012	0.0010	0.0120	0.00036
MISSING VALUES	: 0	0	0	0	0	0

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
SUMMARY STATISTICS OF CONCENTRATION
YEAR 1989

----- STATION=' SHALLOW LAKE LOVOL SITE NO.1' -----
(continued)

	SULFATE NYL AS SO4 UG/M3	ARSENIC AS AS UG/M3	TOTAL SULFUR UG/M**3	TOTAL N NITRATE UG/M**3
# OF SAMPLES	10	10	10.00	10.00
MAXIMUM	2.3361	0.0020	6.55	1.29
MINIMUM	0.8893	0.0005	2.28	0.41
ARITH. MEAN	1.4984	0.0011	3.51	0.68
ARITH. STD. DEV	0.5183	0.0004	1.47	0.30
GEOM. MEAN	1.4196	0.0011	3.27	0.63
1ST QUARTILE	1.0725	0.0009	2.33	0.43
2ND QUARTILE	1.3935	0.0010	2.93	0.63
3RD QUARTILE	1.8823	0.0015	4.77	0.71
MISSING VALUES	0	0	0.00	0.00

ONTARIO MINISTRY OF THE ENVIRONMENT
 APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
 SUMMARY STATISTICS OF CONCENTRATION
 YEAR 1989

----- STATION=' SMITHS FALLS LOVOL SITE NO.1' -----

	SULFUR DIOXIDE AS SO ₂ UG/M3	SULFATE AS SO ₄ UG/M3	NITRIC AS N UG/M3	NITRATE AS N UG/M3	CALCIUM UG/M3	CHLORIDE UG/M3
# OF SAMPLES	10	10	10	10	10	10
MAXIMUM	6.5125	5.201	0.1427	0.634	0.9192	0.822
MINIMUM	1.9892	1.311	0.0490	0.309	0.1084	0.275
ARITH. MEAN	4.0961	3.263	0.0895	0.471	0.3744	0.451
ARITH. STD. DEV	1.8787	1.536	0.0408	0.120	0.2812	0.214
GEOM. MEAN	3.7186	2.926	0.0822	0.458	0.3060	0.416
1ST QUARTILE	2.2030	1.877	0.0584	0.394	0.2524	0.312
2ND QUARTILE	3.9326	3.221	0.0748	0.454	0.3038	0.352
3RD QUARTILE	6.0068	4.749	0.1373	0.581	0.3587	0.595
MISSING VALUES	4	4	4	4	4	4
	POTASSIUM UG/M3	SODIUM UG/M3	IRON AS FE UG/M3	ALUMINIUM AS AL UG/M3	MAGNESIUM UG/M3	LEAD AS PB UG/M3
# OF SAMPLES	10	10	10	10	10	10
MAXIMUM	0.1814	0.3145	0.4693	0.2274	0.3338	0.0104
MINIMUM	0.0446	0.1300	0.0316	0.0151	0.0302	0.0023
ARITH. MEAN	0.0943	0.2124	0.1766	0.0939	0.1459	0.0060
ARITH. STD. DEV	0.0515	0.0674	0.1730	0.0740	0.1074	0.0027
GEOM. MEAN	0.0834	0.2035	0.1161	0.0698	0.1140	0.0054
1ST QUARTILE	0.0498	0.1627	0.0558	0.0490	0.0910	0.0043
2ND QUARTILE	0.0871	0.2071	0.0996	0.0764	0.1094	0.0060
3RD QUARTILE	0.1156	0.2527	0.3039	0.1189	0.2015	0.0068
MISSING VALUES	4	4	4	4	4	4
	MANGANESE AS MN UG/M3	COPPER AS CU UG/M3	NICKEL AS NI UG/M3	VANADIUM AS V UG/M3	ZINC AS ZN UG/M3	CADMIUM AS CD UG/M3
# OF SAMPLES	10	10	10	10	10	10
MAXIMUM	0.0145	0.0039	0.0026	0.0025	0.0243	0.00480
MINIMUM	0.0052	0.0000	0.0000	0.0007	0.0059	0.00013
ARITH. MEAN	0.0088	0.0016	0.0011	0.0013	0.0130	0.00105
ARITH. STD. DEV	0.0036	0.0016	0.0009	0.0006	0.0065	0.00185
GEOM. MEAN	0.0083	0.0022	0.0011	0.0012	0.0118	0.00042
1ST QUARTILE	0.0064	0.0000	0.0008	0.0010	0.0098	0.00014
2ND QUARTILE	0.0075	0.0015	0.0009	0.0012	0.0107	0.00036
3RD QUARTILE	0.0121	0.0030	0.0011	0.0014	0.0164	0.00048
MISSING VALUES	4	4	4	4	4	4

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
SUMMARY STATISTICS OF CONCENTRATION
YEAR 1989

----- STATION=' SMITHS FALLS LOVOL SITE NO.1' -----
(continued)

	SULFATE NYL AS SO ₄ UG/M3	ARSENIC AS AS UG/M3	TOTAL SULFUR UG/M**3	TOTAL N NITRATE UG/M**3
# OF SAMPLES	: 10	10	10.00	10.00
MAXIMUM	: 1.5967	0.0023	4.99	0.72
MINIMUM	: 0.7948	0.0007	2.10	0.44
ARITH. MEAN	: 1.2848	0.0014	3.14	0.56
ARITH. STD. DEV	: 0.3327	0.0006	1.12	0.12
GEOM. MEAN	: 1.2448	0.0013	2.98	0.55
1ST QUARTILE	: 0.9906	0.0009	2.14	0.45
2ND QUARTILE	: 1.3664	0.0013	2.97	0.53
3RD QUARTILE	: 1.5941	0.0016	3.65	0.70
MISSING VALUES	: 4	4	4.00	4.00

ONTARIO MINISTRY OF THE ENVIRONMENT
 APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
 SUMMARY STATISTICS OF CONCENTRATION
 YEAR 1989

----- STATION=' TURKEY LAKES LOVOL SITE NO.1' -----

	SULFUR DIOXIDE AS SO ₂ UG/M3	SULFATE AS SO ₄ UG/M3	NITRIC AS N UG/M3	NITRATE AS N UG/M3	CALCIUM UG/M3	CHLORIDE UG/M3
# OF SAMPLES	: 13	13	13	13	13	13
MAXIMUM	: 5.0622	3.869	0.2720	0.314	0.2106	0.229
MINIMUM	: 1.0067	1.128	0.0750	0.043	0.0000	0.068
ARITH. MEAN	: 2.8134	2.325	0.1304	0.164	0.0714	0.127
ARITH. STD. DEV	: 1.4054	0.913	0.0611	0.095	0.0689	0.051
GEOM. MEAN	: 2.4886	2.148	0.1201	0.138	0.0730	0.119
1ST QUARTILE	: 1.7852	1.673	0.0900	0.094	0.0223	0.094
2ND QUARTILE	: 2.3738	2.301	0.1041	0.136	0.0530	0.114
3RD QUARTILE	: 4.3177	3.127	0.1429	0.255	0.1080	0.147
MISSING VALUES	: 0	0	0	0	0	0
	POTASSIUM UG/M3	SODIUM UG/M3	IRON AS FE UG/M3	ALUMINIUM AS AL UG/M3	MAGNESIUM UG/M3	LEAD AS PB UG/M3
# OF SAMPLES	: 13	13	13	13	13	13
MAXIMUM	: 0.1800	0.2526	0.1736	0.2232	0.6934	0.0068
MINIMUM	: 0.0197	0.0833	0.0063	0.0168	0.0168	0.0000
ARITH. MEAN	: 0.0455	0.1377	0.0694	0.0608	0.0921	0.0022
ARITH. STD. DEV	: 0.0425	0.0582	0.0423	0.0557	0.1817	0.0022
GEOM. MEAN	: 0.0366	0.1280	0.0549	0.0451	0.0471	0.0015
1ST QUARTILE	: 0.0256	0.0906	0.0395	0.0217	0.0284	0.0001
2ND QUARTILE	: 0.0287	0.1271	0.0703	0.0493	0.0400	0.0019
3RD QUARTILE	: 0.0469	0.1573	0.0854	0.0706	0.0514	0.0033
MISSING VALUES	: 0	0	0	0	0	0
	MANGANESE AS MN UG/M3	COPPER AS CU UG/M3	NICKEL AS NI UG/M3	VANADIUM AS V UG/M3	ZINC AS ZN UG/M3	CADMIUM AS CD UG/M3
# OF SAMPLES	: 13	13	13	13	13	13
MAXIMUM	: 0.0072	0.0179	0.0109	0.0032	0.0179	0.00495
MINIMUM	: 0.0014	0.0009	0.0004	0.0001	0.0015	0.00000
ARITH. MEAN	: 0.0033	0.0031	0.0014	0.0006	0.0070	0.00054
ARITH. STD. DEV	: 0.0017	0.0046	0.0029	0.0008	0.0043	0.00133
GEOM. MEAN	: 0.0029	0.0020	0.0007	0.0004	0.0059	0.00025
1ST QUARTILE	: 0.0019	0.0013	0.0005	0.0003	0.0040	0.00012
2ND QUARTILE	: 0.0031	0.0016	0.0006	0.0004	0.0060	0.00013
3RD QUARTILE	: 0.0035	0.0024	0.0007	0.0005	0.0086	0.00025
MISSING VALUES	: 0	0	0	0	0	0

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
SUMMARY STATISTICS OF CONCENTRATION
YEAR 1989

----- STATION=' TURKEY LAKES LOVOL SITE NO.1' -----
(continued)

	SULFATE NYL AS SO4 UG/M3	ARSENIC AS AS UG/M3	TOTAL SULFUR UG/M**3	TOTAL N NITRATE UG/M**3
# OF SAMPLES	: 13	13	13.00	13.00
MAXIMUM	: 1.9714	0.0020	3.40	0.56
MINIMUM	: 0.7841	0.0002	1.16	0.13
ARITH. MEAN	: 1.2347	0.0009	2.18	0.29
ARITH. STD. DEV	: 0.3732	0.0005	0.75	0.15
GEOM. MEAN	: 1.1854	0.0008	2.06	0.26
1ST QUARTILE	: 0.9298	0.0006	1.58	0.20
2ND QUARTILE	: 1.2515	0.0009	2.20	0.25
3RD QUARTILE	: 1.3366	0.0010	2.82	0.44
MISSING VALUES	: 0	0	0.00	0.00

ONTARIO MINISTRY OF THE ENVIRONMENT
 APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
 SUMMARY STATISTICS OF CONCENTRATION
 YEAR 1989

STATION=' UXBRIDGE LOVOL SITE NO.1' -----

	SULFUR DIOXIDE AS SO ₂ UG/M3	SULFATE AS SO ₄ UG/M3	NITRIC AS N UG/M3	NITRATE AS N UG/M3	CALCIUM UG/M3	CHLORIDE UG/M3
# OF SAMPLES	13	13	13	13	13	13
MAXIMUM	10.5954	7.312	0.2952	0.753	1.2638	1.446
MINIMUM	2.0805	2.250	0.1103	0.311	0.1313	0.221
ARITH. MEAN	5.6624	4.136	0.1879	0.516	0.6253	0.502
ARITH. STD. DEV	2.8131	1.748	0.0519	0.168	0.3644	0.367
GEOM. MEAN	4.9661	3.816	0.1815	0.490	0.5135	0.418
1ST QUARTILE	3.1951	2.702	0.1527	0.348	0.3122	0.274
2ND QUARTILE	5.7497	3.450	0.1836	0.482	0.6687	0.318
3RD QUARTILE	7.8219	5.600	0.2128	0.681	0.8814	0.595
MISSING VALUES	1	0	1	0	0	0
	POTASSIUM UG/M3	SODIUM UG/M3	IRON AS FE UG/M3	ALUMINIUM AS AL UG/M3	MAGNESIUM UG/M3	LEAD AS PB UG/M3
# OF SAMPLES	13	13	13	13	13	13
MAXIMUM	0.1557	1.8619	0.2836	0.2836	0.1613	0.0132
MINIMUM	0.0196	0.1224	0.0556	0.0416	0.0351	0.0000
ARITH. MEAN	0.0619	0.5869	0.1418	0.1265	0.0787	0.0091
ARITH. STD. DEV	0.0377	0.6332	0.0811	0.0811	0.0373	0.0039
GEOM. MEAN	0.0525	0.3674	0.1224	0.1057	0.0713	0.0094
1ST QUARTILE	0.0347	0.1984	0.0726	0.0643	0.0548	0.0082
2ND QUARTILE	0.0473	0.2722	0.1176	0.0856	0.0636	0.0100
3RD QUARTILE	0.0847	0.7062	0.1795	0.1567	0.0963	0.0123
MISSING VALUES	0	0	0	0	0	0
	MANGANESE AS MN UG/M3	COPPER AS CU UG/M3	NICKEL AS NI UG/M3	VANADIUM AS V UG/M3	ZINC AS ZN UG/M3	CADMUM AS CD UG/M3
# OF SAMPLES	13	13	13	13	13	13
MAXIMUM	0.0148	0.0039	0.0023	0.0013	0.0242	0.00094
MINIMUM	0.0032	0.0014	0.0005	0.0005	0.0079	0.00015
ARITH. MEAN	0.0077	0.0027	0.0012	0.0009	0.0174	0.00046
ARITH. STD. DEV	0.0035	0.0007	0.0005	0.0003	0.0050	0.00023
GEOM. MEAN	0.0070	0.0026	0.0011	0.0008	0.0166	0.00040
1ST QUARTILE	0.0052	0.0024	0.0009	0.0007	0.0143	0.00032
2ND QUARTILE	0.0073	0.0027	0.0011	0.0008	0.0176	0.00049
3RD QUARTILE	0.0087	0.0031	0.0015	0.0011	0.0217	0.00058
MISSING VALUES	0	0	0	0	0	0

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
SUMMARY STATISTICS OF CONCENTRATION
YEAR 1989

----- STATION=' UXBRIDGE LOVOL SITE NO.1' -----
(continued)

	SULFATE NYL AS SO4 UG/M3	ARSENIC AS AS UG/M3	TOTAL SULFUR UG/M**3	TOTAL N NITRATE UG/M**3
# OF SAMPLES	: 13	13	13.00	13.00
MAXIMUM	: 2.1892	0.0024	6.20	1.01
MINIMUM	: 0.9145	0.0003	2.11	0.50
ARITH. MEAN	: 1.6033	0.0015	4.12	0.71
ARITH. STD. DEV	: 0.4325	0.0006	1.30	0.18
GEOM. MEAN	: 1.5435	0.0013	3.91	0.69
1ST QUARTILE	: 1.2959	0.0012	3.37	0.54
2ND QUARTILE	: 1.6275	0.0016	4.15	0.68
3RD QUARTILE	: 1.9577	0.0018	5.12	0.87
MISSING VALUES	: 1	0	1.00	1.00

ONTARIO MINISTRY OF THE ENVIRONMENT
 APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
 SUMMARY STATISTICS OF CONCENTRATION
 YEAR 1989

----- STATION=' WILKESPORT LOVOL SITE NO.1' -----

	SULFUR DIOXIDE	SULFATE	NITRIC	NITRATE	CALCIUM	CHLORIDE
	AS SO ₂ UG/M3	AS SO ₄ UG/M3	AS N UG/M3	AS N UG/M3	UG/M3	UG/M3
# OF SAMPLES	: 13	13	13	13	13	13
MAXIMUM	: 21.8497	11.743	0.3543	1.168	1.2217	1.098
MINIMUM	: 7.0972	2.662	0.1587	0.516	0.3184	0.283
ARITH. MEAN	: 13.6237	5.311	0.2350	0.918	0.6462	0.628
ARITH. STD. DEV	: 4.0463	2.426	0.0566	0.214	0.2597	0.264
GEOM. MEAN	: 13.0720	4.907	0.2290	0.892	0.6005	0.580
1ST QUARTILE	: 10.9937	4.050	0.2031	0.771	0.4904	0.448
2ND QUARTILE	: 12.8029	4.682	0.2086	0.961	0.5773	0.519
3RD QUARTILE	: 15.7862	6.110	0.2726	1.115	0.8151	0.785
MISSING VALUES	: 0	0	0	0	0	0
	POTASSIUM UG/M3	SODIUM UG/M3	IRON AS FE UG/M3	ALUMINIUM AS AL UG/M3	MAGNESIUM UG/M3	LEAD AS PB UG/M3
# OF SAMPLES	: 13	13	13	13	13	13
MAXIMUM	: 0.2125	0.4520	0.2767	0.2824	0.2015	0.0214
MINIMUM	: 0.0190	0.0912	0.0825	0.0601	0.0654	0.0000
ARITH. MEAN	: 0.0722	0.2036	0.1912	0.1359	0.1173	0.0124
ARITH. STD. DEV	: 0.0483	0.1176	0.0569	0.0589	0.0412	0.0060
GEOM. MEAN	: 0.0616	0.1770	0.1822	0.1253	0.1107	0.0125
1ST QUARTILE	: 0.0480	0.1135	0.1541	0.0868	0.0829	0.0092
2ND QUARTILE	: 0.0573	0.1445	0.2064	0.1168	0.1143	0.0121
3RD QUARTILE	: 0.0880	0.2954	0.2212	0.1700	0.1397	0.0157
MISSING VALUES	: 0	0	0	0	0	0
	MANGANESE AS MN UG/M3	COPPER AS CU UG/M3	NICKEL AS NI UG/M3	VANADIUM AS V UG/M3	ZINC AS ZN UG/M3	CADMIUM AS CD UG/M3
# OF SAMPLES	: 13	13	13	13	13	13
MAXIMUM	: 0.0114	0.0047	0.0034	0.0034	0.0501	0.00101
MINIMUM	: 0.0051	0.0022	0.0010	0.0014	0.0204	0.00024
ARITH. MEAN	: 0.0078	0.0031	0.0018	0.0024	0.0326	0.00056
ARITH. STD. DEV	: 0.0022	0.0007	0.0007	0.0007	0.0082	0.00024
GEOM. MEAN	: 0.0075	0.0031	0.0017	0.0023	0.0317	0.00051
1ST QUARTILE	: 0.0058	0.0027	0.0014	0.0017	0.0276	0.00036
2ND QUARTILE	: 0.0085	0.0029	0.0017	0.0024	0.0307	0.00059
3RD QUARTILE	: 0.0088	0.0035	0.0019	0.0031	0.0349	0.00072
MISSING VALUES	: 0	0	0	0	0	0

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
SUMMARY STATISTICS OF CONCENTRATION
YEAR 1989

----- STATION=' WILKESPORT LOVOL SITE NO.1' -----
(continued)

	SULFATE NYL. AS SO4 UG/M3	ARSENIC AS AS UG/M3	TOTAL SULFUR UG/M**3	TOTAL N NITRATE UG/M**3
# OF SAMPLES	: 13	13	13.00	13.00
MAXIMUM	: 2.2101	0.0031	11.98	1.41
MINIMUM	: 0.7758	0.0005	5.00	0.72
ARITH. MEAN	: 1.3763	0.0014	8.58	1.15
ARITH. STD. DEV	: 0.4341	0.0007	1.75	0.23
GEOM. MEAN	: 1.3133	0.0012	8.41	1.13
1ST QUARTILE	: 1.0800	0.0009	7.97	0.93
2ND QUARTILE	: 1.3372	0.0014	8.17	1.24
3RD QUARTILE	: 1.5632	0.0015	9.41	1.33
MISSING VALUES	: 0	0	0.00	0.00

PART IV

SUMMARY STATISTICS OF OBSERVED CONCENTRATION BY REGION

ONTARIO MINISTRY OF THE ENVIRONMENT
 APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
 SUMMARY STATISTICS OF CONCENTRATION
 YEAR 1989

----- REGCODE=CE -----

	SULFUR DIOXIDE AS SO ₂ UG/M3	SULFATE AS SO ₄ UG/M3	NITRIC AS N UG/M3	NITRATE AS N UG/M3	CALCIUM UG/M3	CHLORIDE UG/M3
# OF SAMPLES	: 64	64	64	64	64	64
MAXIMUM	: 548.348	701.346	7.0991	104.039	159.119	34.272
MINIMUM	: 0.7055	0.955	0.0713	0.000	0.0000	0.000
ARITH. MEAN	: 17.6274	17.461	0.3591	2.429	3.4870	1.056
ARITH. STD. DEV	: 76.8182	95.774	0.9571	14.235	21.7943	4.691
GEOM. MEAN	: 5.4796	4.195	0.2236	0.320	0.3277	0.406
1ST QUARTILE	: 3.1528	2.754	0.1527	0.036	0.0910	0.000
2ND QUARTILE	: 5.5747	3.771	0.2309	0.337	0.2877	0.271
3RD QUARTILE	: 7.6566	5.600	0.2916	0.840	0.8634	0.567
MISSING VALUES	: 14	11	12	11	11	11
	POTASSIUM UG/M3	SODIUM UG/M3	IRON AS FE UG/M3	ALUMINIUM AS AL UG/M3	MAGNESIUM UG/M3	LEAD AS PB UG/M3
# OF SAMPLES	: 64	64	64	64	64	64
MAXIMUM	: 8.2619	14.6879	19.5838	20.8078	13.4639	1.7136
MINIMUM	: 0.0140	0.0226	0.0000	0.0143	0.0146	0.0000
ARITH. MEAN	: 0.2189	0.5828	0.5440	0.5509	0.3551	0.0428
ARITH. STD. DEV	: 1.1266	2.0166	2.6698	2.8403	1.8369	0.2341
GEOM. MEAN	: 0.0604	0.1810	0.1357	0.1154	0.0839	0.0103
1ST QUARTILE	: 0.0378	0.0979	0.0556	0.0487	0.0361	0.0046
2ND QUARTILE	: 0.0532	0.1646	0.1378	0.1108	0.0767	0.0082
3RD QUARTILE	: 0.0863	0.3205	0.2688	0.2461	0.1613	0.0131
MISSING VALUES	: 11	11	11	11	11	11
	MANGANESE AS MN UG/M3	COPPER AS CU UG/M3	NICKEL AS NI UG/M3	VANADIUM AS V UG/M3	ZINC AS ZN UG/M3	CADMIUM AS CD UG/M3
# OF SAMPLES	: 64	64	64	64	64	64
MAXIMUM	: 1.0526	0.4162	0.2938	0.1346	1.8360	0.04896
MINIMUM	: 0.0012	0.0011	0.0000	0.0002	0.0038	0.00000
ARITH. MEAN	: 0.0280	0.0113	0.0070	0.0037	0.0548	0.00163
ARITH. STD. DEV	: 0.1436	0.0567	0.0402	0.0184	0.2498	0.00671
GEOM. MEAN	: 0.0072	0.0034	0.0014	0.0011	0.0180	0.00049
1ST QUARTILE	: 0.0034	0.0021	0.0009	0.0006	0.0100	0.00023
2ND QUARTILE	: 0.0078	0.0027	0.0013	0.0010	0.0141	0.00045
3RD QUARTILE	: 0.0121	0.0043	0.0017	0.0013	0.0242	0.00081
MISSING VALUES	: 11	11	11	11	11	11

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
SUMMARY STATISTICS OF CONCENTRATION
YEAR 1989

REGCODE=CE
(continued)

	SULFATE NYL AS SO4 UG/M3	ARSENIC AS AS UG/M3	TOTAL SULFUR UG/M**3	TOTAL N NITRATE UG/M**3
# OF SAMPLES	:	64	64.00	64.00
MAXIMUM	:	128.519	507.96	111.14
MINIMUM	:	0.2774	0.0003	0.19
ARITH. MEAN	:	3.6623	0.0072	2.93
ARITH. STD. DEV	:	17.6652	0.0401	15.62
GEOM. MEAN	:	1.1589	0.0016	0.64
1ST QUARTILE	:	0.7786	0.0012	0.37
2ND QUARTILE	:	1.0838	0.0016	0.52
3RD QUARTILE	:	1.6867	0.0020	1.07
MISSING VALUES	:	12	11	14.00

ONTARIO MINISTRY OF THE ENVIRONMENT
 APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
 SUMMARY STATISTICS OF CONCENTRATION
 YEAR 1989

REGCODE=NE

	SULFUR DIOXIDE AS SO ₂ UG/M3	SULFATE AS SO ₄ UG/M3	NITRIC AS N UG/M3	NITRATE AS N UG/M3	CALCIUM UG/M3	CHLORIDE UG/M3
# OF SAMPLES	118	118	118	118	118	118
MAXIMUM	56.4234	8.525	2.7541	2.951	4.5296	5.246
MINIMUM	0.0000	0.442	0.0186	0.000	0.0000	0.059
ARITH. MEAN	7.4047	2.533	0.1587	0.192	0.1614	0.337
ARITH. STD. DEV	8.5610	1.331	0.2625	0.285	0.4731	0.704
GEOM. MEAN	4.3754	2.172	0.1136	0.138	0.0927	0.201
1ST QUARTILE	2.1668	1.565	0.0815	0.093	0.0293	0.124
2ND QUARTILE	4.3301	2.315	0.1256	0.141	0.0682	0.177
3RD QUARTILE	9.4776	3.313	0.1684	0.220	0.1232	0.235
MISSING VALUES	1	1	1	1	1	1
	POTASSIUM UG/M3	SODIUM UG/M3	IRON AS FE UG/M3	ALUMINIUM AS AL UG/M3	MAGNESIUM UG/M3	LEAD AS PB UG/M3
# OF SAMPLES	118	118	118	118	118	118
MAXIMUM	0.3279	3.1148	11.1748	7.2689	2.2001	0.4788
MINIMUM	0.0000	0.0661	0.0000	0.0053	0.0149	0.0000
ARITH. MEAN	0.0475	0.2659	0.2304	0.1710	0.1435	0.0115
ARITH. STD. DEV	0.0418	0.4638	1.0354	0.6820	0.2935	0.0442
GEOM. MEAN	0.0393	0.1743	0.0879	0.0629	0.0633	0.0057
1ST QUARTILE	0.0278	0.1110	0.0384	0.0279	0.0343	0.0019
2ND QUARTILE	0.0376	0.1503	0.0854	0.0646	0.0476	0.0053
3RD QUARTILE	0.0513	0.2357	0.1685	0.1270	0.0739	0.0110
MISSING VALUES	1	1	1	1	1	1
	MANGANESE AS MN UG/M3	COPPER AS CU UG/M3	NICKEL AS NI UG/M3	VANADIUM AS V UG/M3	ZINC AS ZN UG/M3	CADMIUM AS CD UG/M3
# OF SAMPLES	118	118	118	118	118	118
MAXIMUM	0.2199	0.7889	0.2270	0.0168	0.4271	0.02588
MINIMUM	0.0008	0.0000	0.0000	0.0000	0.0010	0.00000
ARITH. MEAN	0.0064	0.0126	0.0063	0.0009	0.0139	0.00099
ARITH. STD. DEV	0.0205	0.0727	0.0224	0.0020	0.0395	0.00284
GEOM. MEAN	0.0035	0.0039	0.0019	0.0005	0.0083	0.00043
1ST QUARTILE	0.0021	0.0020	0.0007	0.0003	0.0055	0.00014
2ND QUARTILE	0.0033	0.0031	0.0012	0.0005	0.0089	0.00036
3RD QUARTILE	0.0047	0.0081	0.0038	0.0007	0.0133	0.00068
MISSING VALUES	1	1	1	1	1	1

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
SUMMARY STATISTICS OF CONCENTRATION
YEAR 1989

REGCODE=NE
(continued)

	SULFATE NYL AS SO4 UG/M3	ARSENIC AS AS UG/M3	TOTAL SULFUR UG/M**3	TOTAL N NITRATE UG/M**3
# OF SAMPLES	: 118	118	118.00	118.00
MAXIMUM	: 40.6557	0.1204	29.52	5.70
MINIMUM	: 0.2042	0.0000	0.15	0.04
ARITH. MEAN	: 1.7481	0.0032	4.55	0.35
ARITH. STD. DEV	: 3.7846	0.0112	4.45	0.54
GEOM. MEAN	: 1.2579	0.0017	3.09	0.26
1ST QUARTILE	: 0.9298	0.0009	1.72	0.16
2ND QUARTILE	: 1.2754	0.0016	3.19	0.26
3RD QUARTILE	: 1.7151	0.0027	5.56	0.38
MISSING VALUES	: 1	1	1.00	1.00

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ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
SUMMARY STATISTICS OF CONCENTRATION
YEAR 1989

----- REGCODE=NW -----

	SULFUR DIOXIDE AS SO ₂ UG/M3	SULFATE AS SO ₄ UG/M3	NITRIC AS N UG/M3	NITRATE AS N UG/M3	CALCIUM UG/M3	CHLORIDE UG/M3
# OF SAMPLES	78	78	78	78	78	78
MAXIMUM	5.4108	5.106	2.7290	2.313	8.5106	8.788
MINIMUM	0.0000	0.141	0.0235	0.025	0.0000	0.083
ARITH. MEAN	0.9994	1.405	0.1384	0.154	0.4011	0.455
ARITH. STD. DEV	0.9584	0.889	0.4232	0.344	1.1795	1.397
GEOM. MEAN	0.7532	1.182	0.0619	0.088	0.1582	0.184
1ST QUARTILE	0.3939	0.830	0.0398	0.059	0.0475	0.117
2ND QUARTILE	0.6350	1.268	0.0553	0.078	0.1300	0.147
3RD QUARTILE	1.2168	1.657	0.0699	0.117	0.2788	0.209
MISSING VALUES	3	3	3	3	3	3
	POTASSIUM UG/M3	SODIUM UG/M3	IRON AS FE UG/M3	ALUMINIUM AS AL UG/M3	MAGNESIUM UG/M3	LEAD AS PB UG/M3
# OF SAMPLES	78	78	78	78	78	78
MAXIMUM	0.2775	5.2266	12.7660	1.3876	1.1915	0.3404
MINIMUM	0.0000	0.0648	0.0000	0.0077	0.0102	0.0000
ARITH. MEAN	0.0377	0.3157	0.3942	0.1163	0.0944	0.0128
ARITH. STD. DEV	0.0411	0.8224	1.9292	0.2022	0.1766	0.0526
GEOM. MEAN	0.0279	0.1544	0.0743	0.0586	0.0549	0.0037
1ST QUARTILE	0.0165	0.0995	0.0300	0.0230	0.0286	0.0016
2ND QUARTILE	0.0270	0.1287	0.0569	0.0646	0.0492	0.0041
3RD QUARTILE	0.0493	0.1754	0.1101	0.1343	0.0977	0.0069
MISSING VALUES	3	3	3	3	3	3
	MANGANESE AS MN UG/M3	COPPER AS CU UG/M3	NICKEL AS NI UG/M3	VANADIUM AS V UG/M3	ZINC AS ZN UG/M3	CADMIDIUM AS CD UG/M3
# OF SAMPLES	78	78	78	78	78	78
MAXIMUM	0.0681	0.0185	0.0340	0.0009	0.0925	0.00427
MINIMUM	0.0004	0.0000	0.0000	0.0000	0.0000	0.00000
ARITH. MEAN	0.0049	0.0021	0.0014	0.0003	0.0063	0.00019
ARITH. STD. DEV	0.0098	0.0035	0.0043	0.0002	0.0127	0.00053
GEOM. MEAN	0.0028	0.0013	0.0009	0.0003	0.0041	0.00021
1ST QUARTILE	0.0014	0.0007	0.0004	0.0002	0.0028	0.00000
2ND QUARTILE	0.0028	0.0011	0.0006	0.0003	0.0039	0.00012
3RD QUARTILE	0.0047	0.0015	0.0010	0.0004	0.0055	0.00019
MISSING VALUES	3	3	3	3	3	3

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
SUMMARY STATISTICS OF CONCENTRATION
YEAR 1989

REGCODE=NW -----

(continued)

	SULFATE NYL AS SO4 UG/M3	ARSENIC AS AS UG/M3	TOTAL SULFUR UG/M**3	TOTAL N NITRATE UG/M**3
# OF SAMPLES	: 78	78	78.00	78.00
MAXIMUM	: 5.5532	0.0085	3.84	5.04
MINIMUM	: 0.1479	0.0000	0.11	0.05
ARITH. MEAN	: 0.6582	0.0009	0.97	0.29
ARITH. STD. DEV	: 0.8070	0.0012	0.65	0.76
GEOM. MEAN	: 0.4995	0.0007	0.80	0.15
1ST QUARTILE	: 0.3610	0.0004	0.54	0.10
2ND QUARTILE	: 0.5098	0.0005	0.78	0.13
3RD QUARTILE	: 0.6164	0.0010	1.22	0.19
MISSING VALUES	: 3	3	3.00	3.00

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ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
SUMMARY STATISTICS OF CONCENTRATION
YEAR 1989

REGCODE=SE

	SULFUR DIOXIDE AS SO ₂ UG/M3	SULFATE AS SO ₄ UG/M3	NITRIC AS N UG/M3	NITRATE AS N UG/M3	CALCIUM UG/M3	CHLORIDE UG/M3
# OF SAMPLES	: 55	55	55	55	55	55
MAXIMUM	: 30.0888	9.853	0.4494	1.408	1.0281	3.712
MINIMUM	: 0.6245	1.311	0.0393	0.104	0.0000	0.160
ARITH. MEAN	: 4.8116	4.182	0.1152	0.462	0.3685	0.480
ARITH. STD. DEV	: 5.2617	1.893	0.0838	0.254	0.2810	0.624
GEOM. MEAN	: 3.4780	3.761	0.0944	0.399	0.3023	0.357
1ST QUARTILE	: 1.9892	2.788	0.0536	0.257	0.1521	0.242
2ND QUARTILE	: 3.5186	4.335	0.0885	0.457	0.2757	0.303
3RD QUARTILE	: 5.6784	5.201	0.1549	0.590	0.5971	0.407
MISSING VALUES	: 21	21	21	21	21	21
	POTASSIUM UG/M3	SODIUM UG/M3	IRON AS FE UG/M3	ALUMINIUM AS AL UG/M3	MAGNESIUM UG/M3	LEAD AS PB UG/M3
# OF SAMPLES	: 55	55	55	55	55	55
MAXIMUM	: 1.9289	0.7749	0.4693	0.2900	0.3338	0.0159
MINIMUM	: 0.0000	0.0971	0.0251	0.0151	0.0291	0.0006
ARITH. MEAN	: 0.1895	0.2058	0.1108	0.1030	0.0862	0.0071
ARITH. STD. DEV	: 0.3834	0.1392	0.0864	0.0669	0.0578	0.0046
GEOM. MEAN	: 0.1057	0.1801	0.0899	0.0834	0.0738	0.0053
1ST QUARTILE	: 0.0597	0.1320	0.0605	0.0514	0.0502	0.0038
2ND QUARTILE	: 0.0935	0.1627	0.0967	0.0873	0.0777	0.0064
3RD QUARTILE	: 0.1192	0.2275	0.1228	0.1287	0.0978	0.0111
MISSING VALUES	: 21	22	21	21	21	21
	MANGANESE AS MN UG/M3	COPPER AS CU UG/M3	NICKEL AS NI UG/M3	VANADIUM AS V UG/M3	ZINC AS ZN UG/M3	CADMIUM AS CD UG/M3
# OF SAMPLES	: 55	55	55	55	55	55
MAXIMUM	: 0.0301	0.0111	0.0240	0.0097	0.0524	0.00796
MINIMUM	: 0.0023	0.0000	0.0000	0.0005	0.0059	0.00000
ARITH. MEAN	: 0.0086	0.0028	0.0021	0.0017	0.0179	0.00090
ARITH. STD. DEV	: 0.0069	0.0022	0.0040	0.0018	0.0106	0.00190
GEOM. MEAN	: 0.0067	0.0030	0.0014	0.0013	0.0154	0.00038
1ST QUARTILE	: 0.0039	0.0015	0.0009	0.0007	0.0100	0.00018
2ND QUARTILE	: 0.0064	0.0028	0.0011	0.0012	0.0157	0.00030
3RD QUARTILE	: 0.0093	0.0039	0.0017	0.0018	0.0243	0.00042
MISSING VALUES	: 21	21	21	21	21	21

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
SUMMARY STATISTICS OF CONCENTRATION
YEAR 1989

REGCODE=SE

(continued)

	SULFATE NYL AS SO4 UG/M3	ARSENIC AS AS UG/M3	TOTAL SULFUR UG/M**3	TOTAL N NITRATE UG/M**3
# OF SAMPLES	55	55	55.00	55.00
MAXIMUM	2.4413	0.0193	17.34	1.67
MINIMUM	0.5855	0.0004	1.48	0.14
ARITH. MEAN	1.3390	0.0020	3.80	0.58
ARITH. STD. DEV	0.4862	0.0032	2.76	0.31
GEOM. MEAN	1.2573	0.0013	3.31	0.50
1ST QUARTILE	1.0007	0.0007	2.30	0.33
2ND QUARTILE	1.2384	0.0012	3.42	0.57
3RD QUARTILE	1.6369	0.0018	4.31	0.74
MISSING VALUES	21	21	21.00	21.00

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ONTARIO MINISTRY OF THE ENVIRONMENT
 APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
 SUMMARY STATISTICS OF CONCENTRATION
 YEAR 1989

----- REGCODE=SW -----

	SULFUR DIOXIDE AS SO ₂ UG/M3	SULFATE AS SO ₄ UG/M3	NITRIC AS N UG/M3	NITRATE AS N UG/M3	CALCIUM UG/M3	CHLORIDE UG/M3
# OF SAMPLES	: 75	75	75	75	75	75
MAXIMUM	: 24.0961	13.572	0.5897	1.472	1.7871	1.323
MINIMUM	: 0.5336	0.358	0.0473	0.163	0.0000	0.136
ARITH. MEAN	: 9.9628	4.984	0.2544	0.867	0.5827	0.522
ARITH. STD. DEV	: 5.4656	2.450	0.0997	0.298	0.3439	0.267
GEOM. MEAN	: 8.1541	4.428	0.2340	0.798	0.5044	0.462
1ST QUARTILE	: 5.9021	3.448	0.1665	0.664	0.3270	0.338
2ND QUARTILE	: 9.6598	4.525	0.2528	0.964	0.5282	0.468
3RD QUARTILE	: 13.0956	5.819	0.3194	1.090	0.7800	0.651
MISSING VALUES	: 1	1	1	1	1	1
	POTASSIUM UG/M3	SODIUM UG/M3	IRON AS FE UG/M3	ALUMINIUM AS AL UG/M3	MAGNESIUM UG/M3	LEAD AS PB UG/M3
# OF SAMPLES	: 75	75	75	75	75	75
MAXIMUM	: 2.2573	1.9909	0.4017	0.3454	0.3839	0.0256
MINIMUM	: 0.0054	0.0408	0.0082	0.0059	0.0051	0.0000
ARITH. MEAN	: 0.0965	0.2481	0.1750	0.1391	0.1389	0.0104
ARITH. STD. DEV	: 0.2572	0.2472	0.0777	0.0727	0.0741	0.0061
GEOM. MEAN	: 0.0606	0.1965	0.1544	0.1184	0.1182	0.0084
1ST QUARTILE	: 0.0473	0.1259	0.1135	0.0884	0.0882	0.0047
2ND QUARTILE	: 0.0583	0.1734	0.1625	0.1193	0.1278	0.0105
3RD QUARTILE	: 0.0872	0.2863	0.2272	0.1767	0.1777	0.0143
MISSING VALUES	: 1	1	1	1	1	1
	MANGANESE AS MN UG/M3	COPPER AS CU UG/M3	NICKEL AS NI UG/M3	VANADIUM AS V UG/M3	ZINC AS ZN UG/M3	CADMIUM AS CD UG/M3
# OF SAMPLES	: 75	75	75	75	75	75
MAXIMUM	: 0.0187	0.0535	0.0174	0.0036	0.2009	0.08198
MINIMUM	: 0.0008	0.0011	0.0003	0.0001	0.0034	0.00000
ARITH. MEAN	: 0.0081	0.0041	0.0018	0.0017	0.0307	0.00167
ARITH. STD. DEV	: 0.0033	0.0062	0.0020	0.0008	0.0250	0.00947
GEOM. MEAN	: 0.0072	0.0032	0.0015	0.0014	0.0251	0.00050
1ST QUARTILE	: 0.0058	0.0025	0.0012	0.0010	0.0172	0.00026
2ND QUARTILE	: 0.0077	0.0030	0.0015	0.0016	0.0270	0.00049
3RD QUARTILE	: 0.0105	0.0039	0.0018	0.0021	0.0379	0.00073
MISSING VALUES	: 1	1	1	1	1	1

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
SUMMARY STATISTICS OF CONCENTRATION
YEAR 1989

REGCODE=SW -----

(continued)

	SULFATE NYL AS SO4 UG/M3	ARSENIC AS AS UG/M3	TOTAL SULFUR UG/M**3	TOTAL N NITRATE UG/M**3
# OF SAMPLES	:	75	75.00	75.00
MAXIMUM	:	4.1716	13.40	1.81
MINIMUM	:	0.5470	0.39	0.21
ARITH. MEAN	:	1.4436	6.64	1.12
ARITH. STD. DEV	:	0.6057	2.80	0.36
GEOM. MEAN	:	1.3424	5.89	1.04
1ST QUARTILE	:	1.0271	4.77	0.88
2ND QUARTILE	:	1.2600	6.70	1.23
3RD QUARTILE	:	1.7295	8.18	1.37
MISSING VALUES	:	1	1.00	1.00